

BNA National Meeting

3-6 April, 2005; Brighton, UK

This year's national BNA meeting was held over four days at the beginning of April, in the sunny seaside town of Brighton. Events took place within the Brighton Centre and adjacent Belgrave Hotel, and were as eclectic and exciting as promised. With the large number and wide range of plenary lectures, symposia, posters and exhibition stands, there was barely time to sample the local fish and chips or take a stroll along the famous pier. The conference was well attended as always, and filled with the faces of those familiar and those yet to be acquainted. It was also noticeable that a number of delegates had previously attended the BNA Post-Graduate Symposium in Manchester last September, and were now meeting again in Brighton; a measurable success of that particular symposium that its attendees were already crossing paths and networking less than a year down the line.

The meeting was opened on the afternoon of Sunday 3rd April by the President of the BNA, Richard Fracowiak, and the drinks reception in the Brighton Centre that followed later that evening ensured that all delegates felt very welcome. The scientific programme of events also began on Sunday, with The Wolstencroft Lecture delivered by Pierre Magistretti from Lausanne. Entitled 'Cellular Bases of Neurometabolic Coupling and its Relevance for Functional Brain Imaging', his presentation focused on developments in our understanding of the coupling between neuronal activity and glucose utilisation by the brain, with particular reference to the 'astrocyte-neuron lactate shuttle' model.

The theme of neuroimaging remained strong throughout the meeting and continued on the second day, with a symposium exploring advances in magnetic resonance (MR) methodology. Speakers in this session gave an informative overview of the progress being made in our understanding and utilisation of MR imaging. David Thomas from the Wellcome Trust High Field MR Research Lab at UCL described advances in neuroimaging involving scanning at magnetic fields as high as 4.7 Tesla (conventional MR scanners typically operate at 1.5 or 3.0 Tesla). His talk explored the pros and cons of high field imaging, and the techniques being developed to improve spatial resolution with impressive results. The use of array coil imaging, discussed by Dr Thomas, was also examined in detail by the second speaker in this session. Joseph Hajnal from Imperial College gave a comprehensive explanation of the advantages of using arrays of receiver coils and partially parallel imaging, which make use of more localised sensitivity and can improve acquisition time and distortion artefacts during imaging. He also offered a valuable insight into how these methods might be developed in the future. The next talk was from Fernando Calamante of ICH, who described developments in the specific field of diffusion MR imaging. Diffusion MR, which relies on the diffusion properties of water molecules within dif-



ferent structures, is a relatively novel technique that allows the visualisation and investigation of fibre tracts within the brain. Also from ICH, Mark Lythgoe then spoke about other ways in which our knowledge and use of MR methods are progressing, with a discussion covering a number of topics including the use of high-throughput high resolution imaging in animal model systems and its applications. Finally, Raman Saggiu from the University of Oxford gave a specific insight into her work examining the effects of interleukin-1 β on cerebral energetics, using MR spectroscopy in a model of low-flow ischaemia in the rat.

Other symposia on this day covered topics that included progress in stem cell biology, sensory integration for cognition and action, and the role of microglia in brain injury. In the afternoon, there was also a symposium tackling the important issue of human neuropathology for neuroscience research, with speakers from the CJD Surveillance Unit at the University of Edinburgh (James Ironside), the Institute of Neurology in London (Janice Holton), the UK Multiple Sclerosis Tissue Bank (Richard Reynolds) and the University of Nottingham (James Lowe). These valuable talks highlighted the importance of effective and open communication with the public with regard to the use of human tissue for research purposes, and explored the crucial matter of new regulations following The Human Tissue Act of 2004. There were also two plenary lectures on this second day of the meeting. In the morning, Peter Seeburg (Heidelberg) discussed the critical properties of AMPA receptors, and their role in olfaction and spatial memory, with reference to mouse models. Mechanisms of endocannabinoid signalling were introduced in the second plenary lecture, which was given by Tamas Freund. In his lecture he presented work from his group in Budapest, investigating the importance of CB receptors and exploring potential therapeutic targets for the treatment of anxiety.

There were a number of special events on the second day of the meeting. The first of these was a BNA Discussion Group debating current issues in the teaching of neuroscience. There were also a series of short presentations about the Foresight 'Brain Science, Addiction and

Drugs' Project. This Foresight Project, as part of the Government's Office of Science and Technology, has been set up to provide an evidence-based review of how science and technology may impact our understanding of addiction and the use of psychoactive substances. The project involves Government science advisors, the Home Office, the Police, drugs charities, the pharmaceutical industry and medical research organisations, with the aim that the ethical, legal and economic issues associated with its findings will be considered (see the Foresight Project website www.foresight.gov.uk).

On Monday evening, there was another BNA Discussion Group, this time tackling the ever-important issue of Public Awareness of Science. Speakers for this event included BBC Science Radio Correspondent Pallab Ghosh, Huseyin Mehmet from Imperial College, Science Communicator Myc Riggulsford and Elaine Snell, Science Communicator and Executive Officer for the European Dana Alliance for the Brain (EDAB; www.edab.net). The event was organised in collaboration with EDAB, an organisation designed to promote brain research and one which has a very good relationship with the BNA (indeed EDAB was recently presented with an Award for Public Service by the BNA). Following the event, Elaine confirmed that the workshop had been a real success, and that this success was made measurable by the fact that several of the speakers were approached by delegates on separate occasions to discuss the issues raised. It appears that science communication remains a critical issue for scientists and the media alike. Similarly, an example of another much encouraged collaboration, that between science and the arts, was evident in the fascinating images on display in the foyer exhibition 'Thinking Science - Making Art', a collection provided by Lizzie Burns and the Medical Research Council, and Catherine Draycott and The Wellcome Photographic Library.

A brisk walk along the sea-front on Tuesday morning was an ideal way to start the third day of the meeting. Symposia on this day again covered a broad range of issues, from stem cell plasticity, to information coding in auditory cortex and neuroinflammation. One of the afternoon sessions was focused on promoting recovery

after stroke, and chaired by Cathy Price from UCL. Speakers in this session included Richard Wise from the MRC Clinical Science Centre at the Hammersmith Hospital, who described functional neuroimaging research demonstrating the converging pathways involved in language processing in both healthy individuals and aphasic stroke patients. The implications concerning targeted behavioural and drug therapies to rehabilitate patients were discussed. In the same session, Argye Hillis from Baltimore also discussed mechanisms and stages of language recovery after stroke. Professor Paul Matthews from the University of Oxford Centre for fMRI of the Brain explored evidence that common mechanisms exist in the healthy and injured brain, with regard to motor learning and control. He too made the point that future therapies may be specifically targeted and manipulated, based on strong biological rationale and informative neuroimaging methods. The session ended with a presentation from Jean-Claude Baron from the University of Cambridge, who gave a complementary overview of research mapping motor recovery after stroke.

The plenary lecture on the third day of the meeting was delivered by James McCulloch from the University of Edinburgh, who spoke about the concern that although a significant insight into the mechanisms of ischaemic cell death had been gained in recent years, this success was yet to be translated into new drug treatments. He discussed the obvious importance of research efforts to meet this challenge. On

Tuesday afternoon, there was also the Trends in Neurosciences Lecture, given by Trevor Robbins from The University of Cambridge, and entitled 'Chemistry of the Adaptive Mind'. Professor Robbins gave an overview of research, in both experimental animals and humans, into the action of drugs that affect the prefrontal cortex via ascending neuromodulatory systems, and explored the implications for our understanding and treatment of neuropsychiatric disorders. Special events of note on Tuesday were the BNA Annual General Meeting held at lunchtime, and of course the 'legendary' BNA Conference Banquet and Party in the evening.

Another fairly early start saw the fourth and final day begin with the penultimate plenary lecture. Hugh Perry (University of Southampton) described work from his group using mouse models of prion disease. He presented findings about the interactions between brain inflammation and systemic inflammation, which may contribute to the progression of chronic neurodegeneration. The final plenary lecture of the meeting, concerning axonal regeneration in the CNS, was delivered by Marie Filbin from New York. She presented research from her lab, which shows that elevation of cAMP can promote spinal axon regeneration in an otherwise inhibitory environment; an effect that is transcription-dependent and requires the activation of the transcription factor CREB.

Throughout the meeting in Brighton there were a variety of themed poster sessions, which should also be mentioned. On the final day, for

example, investigators displayed their work on topics including genes and behaviour, behavioural pharmacology, tumours, pain, cerebrovascular disease, trauma, infection, inflammation, gene therapy, neural networks and neuroimaging, to name but a few. It is obviously impossible to mention them all, but fair to say that each poster session reflected the high standard and scope of research presented throughout the meeting, which was brought to a close on Wednesday afternoon leaving enough time for a visit to the Royal Pavilion before a reflective journey home.

The BNA National Meeting 2005 was supported by GlaxoSmithKline, Eli Lilly, Nature Reviews Neuroscience, the Trends Journals, the European Dana Alliance for the Brain, the Association of British Neurologists, the British Neuropathology Society, the Physiological Society and the OST Foresight Project.

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See ACNR 3:5 for an interview with Professor Richard Frackowiak, and ACNR 4:3 for a review article on The Impact of Systemic Inflammation on Brain Inflammation by Professor Hugh Perry

CONFERENCE PREVIEW: 2nd National United in Care Conference

23rd November, 2005; Royal College of Physicians, Regent's Park, London.

The second national United in Care conference is to be held at the Royal College of Physicians on Wednesday 23rd of November 2005, organised by Medical Education Partnership (MEP) Ltd in association with the British Geriatrics Society (BGS).

The practice of geriatric medicine involves healthcare professionals from many different disciplines and the BGS is committed to promoting multidisciplinary approaches in the field. The United in Care series of conferences aim to identify ways in which interdisciplinary collaboration can be improved among healthcare professionals who are providing care for older people. A highly successful inaugural conference was held in London in December 2004.

United in Care 2005 focuses on two important themes – **End-of-life care** and **Mental health issues of medically unwell older people**. Speakers include experts who work in these emotive areas and the programme includes:

- The needs of patients and patient safety – Mary Baker MBE, President of the European Federation of Neurological Associations and the European Parkinson's Disease Association.
- The meaning of futility: a clinical perspective – Dr Edmund Dunstan, Consultant Geriatrician and Honorary Clinical Lecturer, University of Birmingham.
- Resuscitation in old age: what it means for

patients, their families and healthcare staff – Dr Kevin Stewart, Consultant Physician and Medical Director, Winchester and Eastleigh Healthcare NHS Trust.

- The role of hospital clinical ethics committees – Dr Jim Eccles, Consultant Geriatrician and Chair of the Clinical Ethics Committee, Leeds Teaching Hospitals.
- End-of-life decisions in care homes – Dr Katherine Froggatt, Senior Lecturer, Palliative and End-of-Life Care Research Group, School of Nursing & Midwifery, University of Sheffield.
- Flu immunisation for patients and staff – Professor Margot Gosney, Professor of Elderly Care Medicine, Reading University.
- Community matrons: holistic care for the 21st century – Aileen Fraser, Consultant Nurse, Bristol University Hospitals.
- Mobility, rehabilitation and cognitive impairment – Professor Val Pomeroy, Professor of Rehabilitation of Older People, St. George's Hospital Medicine School, London.
- Recognition and management of delirium in acute hospitals – Dr Duncan Forsyth, Consultant Physician, Addenbrooke's Hospital, Cambridge.
- Who develops delirium and why – Dr David Anderson, Consultant Old Age Psychiatrist, Mossley Hill Hospital, Liverpool.
- What makes clinical guidelines work in the

clinical setting? – Professor Martin Eccles, Professor of Clinical Effectiveness and The William Leach Professor of Primary Care Research, University of Newcastle upon Tyne.

- How specialist mental health nursing can help in general hospital wards – Clare Wai, Liaison Mental Health Nurse, Cambridge and Peterborough Mental Health Partnership NHS Trust.

A report on the new British Geriatrics Society guidelines for the recognition and management of delirium in acute hospitals will also be given by Dr Jim George, Consultant Physician and Clinical Director, Cumberland Infirmary, Carlisle.

Abstracts relevant to the interdisciplinary care of older people are also invited for poster presentation. Preliminary results and audit are welcome.

The programme has been devised to encourage debate and full participation of all members of the interdisciplinary team who are involved in the management and care of older people.

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