

July: Celebrating the past, looking to the future

Tuesday 24 June, Admission Day, was a day of special celebration in the Academy's calendar. The admission of 40 new Fellows was a welcome reminder of the extraordinary breadth of scholarly endeavour that underpins improvements in medicine. In a week when the country was also celebrating the 60th anniversary of the NHS and Lord Darzi published his final report, it was timely for the Academy to reflect on the major contribution to healthcare played by our distinguished Fellows.

Also on 24 June, at the Extraordinary General Meeting, the Fellowship elected three outstanding scientists to Honorary Fellowship of the Academy: Professor Sir Martin Evans, Nobel Laureate; Lord Sainsbury of Turville, former Minister for Science; and Professor Chen Zhu, Minister of Health in China and previously Vice President, Chinese Academy of Sciences and Director, Chinese Human Genome Centre, Shanghai. The Honorary Fellows will be admitted to the Academy at the Annual Meeting on 20 November.

Throughout this anniversary year, the Academy has been reflecting on past achievements and future goals and these reflections are echoed in our recent publication 'President's perspectives', enclosed with this mailing. This is an insightful account of a recent interview with the President, Professor Sir John



2008 Fellows

Bell FRS PMedSci, undertaken by Geoff Watts FMedSci, and was specially commissioned to mark the Academy's first decade.

Those of you who were able to attend the celebrations on 24 June will have heard much about our imminent merger with the Novartis Foundation and plans for the refurbishment of 41 Portland Place. Raising funds for the refurbishment - some £5M - will be a great challenge and so it was with great delight that we recently learnt of the most generous donation of £1M from the Welton Foundation (more below). This gets the Academy off to a flying start.

Mary Manning

£1M donation towards Academy headquarters



Building our future: a headquarters
for the Academy of Medical Sciences

The Welton Foundation has pledged to donate £1million to the Academy's new headquarters at 41 Portland Place in honour of their former trustee and Academy Founder Fellow Professor John Newsom-Davis CBE FRS FMedSci.

John Newsom-Davis was a pioneer of neuroimmunology and his work changed the lives of people suffering from autoimmune diseases of the nervous system. He combined the qualities of a fine doctor and those of a distinguished scientist, and he was rightly credited with having steered clinical neurology into the modern era of molecular medicine.

We are extremely grateful for this generous donation, which will contribute significantly to the fundraising target of £5million to refurbish the building. We will name the Council rooms on the first floor of the building the Newsom-Davis Suite in memory of John and his lifelong commitment to medical science as a clinician, researcher and academic. The Academy has benefited from the generosity of The Welton Foundation in the past through a £150,000 to fund our medical science policy work from 2004-2007.



Supporting the next generation

The Academy has established a strong reputation for providing a first class mentoring and outreach programme to the UK's clinical academics. The mentoring scheme, which was first established in 2002, was awarded a new contract from the Department of Health and the National Institute of Health Research in 2007, resulting in the launch of the expanded national mentoring and outreach scheme.

The Academy sees a natural role for itself in leading the development and delivery of appropriate mentoring programmes and outreach activities for the large number of emerging academic groups. The expansion of the scheme has enabled the Academy to involve more doctors at different stages in the academic career pathway. Observations and direct feedback indicate we have responded to the needs of these distinct cohorts of trainees and delivered a trusted, independent and essential service.

The scheme now incorporates a programme of regional events designed to provide mentoring guidance, networking opportunities and advice for all academic trainees. So far, outreach events have taken place in Newcastle, Oxford, London, Coventry, Taunton and York. The events are tailored to meet the needs of pre and postdoctoral scientists and respond directly to local issues. In total, we have had 319 participants at these events; speakers have included, Professor Patrick Vallance FMedSci, Professor Sally Davies FMedSci and Professor Mark Pepys FRS FMedSci.

Speaking of the scheme Professor Sir John Tooke FMedSci said '*The Academy's programme of regional mentoring and outreach activities is a valuable resource for aspiring clinical academics. I greatly enjoyed being part of a local outreach event which I know from feedback I have received was a real stimulus to those considering or embarked on this career path. I would encourage all Fellows to support the scheme.*'

The development of the scheme throughout year one has been based on a number of proven initiatives that we have expanded as well as a number of new activities that are proving to be immensely valuable. For example, the Academy has been looking for an appropriate way to offer mentoring support to pre-doctoral trainees and a new buddy-group/peer mentorship scheme is being piloted. This scheme brings together 5-6 pre-doctoral clinical academics from within a region and/or speciality to form an informal group led by a Clinician Scientist or Clinical Lecturer. The purpose of these groups is to provide individuals with an opportunity to discuss their career development, share ideas, knowledge, experiences and contacts and therefore help reduce isolation. A stage before this, the AMS/MRS Clinical Research Champions and the Visiting Lecturer scheme both serve to inspire foundation year doctors and medical students into academic medicine.

Forging cross-sector communications and institutional collaborations has also been a key part of our activity in year one. Academy mentoring and outreach activities are intended to supplement, and be complementary to, the support that is provided locally and the Academy has worked pro-actively to promote the benefits of mentoring to the wider scientific community and to encourage mentors, mentees and mentoring scheme facilitators to understand and adopt best practice. The Academy is mindful of the need to increase activities to attract brilliant young doctors to academic careers to secure the next generation of leaders in the field at a time when prospects in academic medicine are perceived as comparatively unattractive to individuals. The Academy is in the unique position of being able to use its Fellowship to provide a first class service to respond to this need for support and we encourage all Fellows to become involved and help disseminate information to those who may benefit.



Genomic medicine

The Academy's submission to the House of Lords Science & Technology Committee Inquiry into 'Genomic Medicine' highlighted the promise of genomics to revolutionise our understanding of common diseases and to exert a profound impact on future healthcare. The ability to identify predisposing or protective genetic factors allows us – for the first time in history – to define 'molecular fingerprints' for diseases such as cancer, diabetes or bipolar disorder. Although the promise of genomic medicine has yet to be fully realised, new genetic discoveries bring the reality of this promise ever closer.

The most exciting advances are coming from the recent explosion in Genome Wide Association (GWA) studies – an approach that involves scanning the genomes of large numbers of individuals to find genetic variations associated with disease. The power of this approach was demonstrated at a talk given by Professor Peter Donnelly FRS FMedSci at the Academy's 2008 New Fellow's Admissions Day. Professor Donnelly showed how the number of genetic markers for disease has risen from only a handful in 2002 to over 200 in 2008; he predicted that the pace of discovery would accelerate even further as a result of second-generation GWA studies, follow-on analyses and meta-analyses. Primarily, identifying which genes are involved in a disease gives us new routes to understanding disease aetiology, but also makes it possible to: identify individuals or population groups at increased risk of disease; screen and diagnose disorders more effectively; design more effective drugs; prescribe the best treatment for each patient; and potentially reduce adverse drug reactions.

But the picture, as always, is complex. What is striking is that many of the associations identified by GWA studies do not involve previous candidate genes for a particular disease, and some markers are in genomic locations harbouring no known genes. This represents a challenge - and one that can only be met by greater integration between three historically

distinct approaches to understanding disease causality: genetic mapping, epidemiology and studies of pathophysiological mechanisms.

The ability to interpret genomic data accurately, and to use this information to develop interventions to prevent or treat disease, still therefore requires a great deal of research effort. Furthermore, it is far from evident that the UK environment for translating advances in genomic medicine into healthcare practice is optimal. Genomic diagnostic tools will be used in multiple hospital laboratory settings, including clinical genetics, microbiology, haematology and pathology; rationalisation at hospital or regional level will be needed to minimise costs and to ensure technical and bioinformatics support and quality control.

Also important is the mechanism for evaluating the clinical utility of genomic diagnostic tests, i.e. will knowing the outcome of the test permit better clinical management? Traditionally, diagnostic tests have simply been required to demonstrate accurate and reliable measurement of a particular variable. How will the regulatory framework cope with tests for many different genetic biomarkers with varying degrees of utility? How will the extra costs of testing for clinical utility be borne and reflected in pricing?

These questions and others will be discussed at a forthcoming event on GWA studies, hosted by the Academy's FORUM with industry (see FORUM programme overleaf). This will look at the impact of GWA studies on:

- Using new disease genes to predict individual future risk of disease.
- Facilitating drug discovery and differentiation.
- Stratification and clinical practice.

To download the Academy's response to the House of Lords Science & Technology Committee Inquiry, go to <http://www.acmedsci.ac.uk/p100.html>.

update
comments
ci news
FMedSci
comment
news
update
comment
information
FMedSci

The Academy of Medical Sciences | FORUM

The Academy's FORUM brings together academic investigators with the pharmaceutical and healthcare industries, research funders and charities. The structure provides a valuable resource of expertise in biomedical innovation, research funding and commercial healthcare-related activity.

The FORUM programme is designed to reflect the current issues of the day and to provide debate that is timely and pertinent to both Fellows and FORUM members. This was well demonstrated at the 2008 FORUM Annual Lecture given by Mr Andrew Witty, CEO, GlaxoSmithKline. The lecture, entitled 'The UK pharmaceutical industry: what does the future hold?' set out an agenda that resonated with many in the packed lecture theatre.

The Academy's President, Professor Sir John Bell, is to chair the FORUM this year and a new high-level FORUM Strategy Committee drawn from the UK pharmaceutical industry and major research funders has been convened to discuss the programme of activities. In the next few months the new FORUM Officer, Dr Robert Frost, will be visiting FORUM members and Academy Fellows to share



Andrew Witty

plans for 2008/2009 and canvass views on important topics for future events. Already in the pipeline is a workshop on Genome Wide Association Studies and a third regional Drug Discovery event.

Autumn events programme

Please note the following Academy events taking place in the Autumn. Further details on all Academy events can be found at www.acmedsci.ac.uk/events

- 4 September** - Global Mental Health Symposium
- 5 September** - Risk benefit meeting
- 10 September** - International Health Lecture 2008
- 20 November** - AGM and Fellows 10th Anniversary reception
- 20 November** - Jean Shanks Lecture 2008
- 24/25 November** - Evaluation Forum Symposium
- 3 December** - Diagnostics workshop

Other workshops and events in development include a meeting on GPs and research, Mentoring and Outreach workshops in Cambridge and Liverpool, and Visiting Lectures in Norwich, Cardiff, Leeds and Dundee.