



UCL



SLMS NEWSLETTER

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Dear Colleagues

The new academic year has started with good news about funding, with UCL top of the list for Research Council grants 2008-9 (www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=407995&c=2). There was plenty of room for improvement in our funding success with several research councils including BBSRC but the key to our leading status was the success of Biomedical and Life Sciences in securing MRC funding. UCL received £44m of MRC funding (Imperial, Cambridge, Oxford, KCL £30m, £22m, £22m and £14m respectively), this was achieved with a success rate of 31%, only exceeded amongst the major centres by Cambridge (35%) – others 27% or less.

Our MRC funding success total has steadily improved in the last four years with awards doubling from £22m to the current £44m. There are of course a range of factors which have led to this success but it is reasonable to attribute at least a part of the difference to the establishment of our 'Health Sciences Research Deanery' following the reorganisation of FBS and FLS. This involved investment in a team of research coordinators dedicated to providing information, encouraging strategic cross cutting research initiatives, supporting PI's in preparing funding applications and steadily improving our core platform technologies/methodologies. The ethos has been to improve support, enhance core resources, encourage collaboration across UCL/partner hospitals and facilitate thematic initiatives, with a light touch so as to avoid stifling the innovative freedom of our individual researchers. We may now have a good balance between central coordination/strategy and free rein for individual researchers.

The Research Deanery would not have been possible without

partnership and joint investment between FBS/FLS and the NIHR Comprehensive Biomedical Research Centre (CBRC) and with our NHS partners will be increasingly important with the creation of UCL Partners Academic Health Science Centre (UCLP). In this context it is worth noting that our performance with the MRC is matched by our success with NIHR funding, which now generates in excess of £40m pa research funding for UCL Partners organisations. Most recently an NIHR capital bid submitted jointly by FBS, FLS and the CBRC team secured the balance of £2.2m needed to complete the Darwin Building refurbishment for the UCL Genetics Institute. This is a great example of collaboration involving our basic science and translational research endeavours. The impressive scientific activity in the CBRC was showcased at the open meeting on Sep 17th at which some of our leading researchers from across all UCL sites gave inspirational presentations - more on this in a separate article. The scale of our success with the MRC and NIHR sets us a high bar going forward, particularly given the economic challenges but the link with the CBRC, the further development of the Research Deanery and the plans for UKCMRI provide cause for cautious optimism.

Meanwhile, there have been a number of developments with UCLP outlined in an update in this newsletter and UCL's Vice-Provost Research, Professor David Price is pushing ahead with the Grand Challenges which are described in the newsletter. We hope that staff in SLMS will become increasingly involved with the Grand Challenges. The public profile of work in the School has been high and featured across web, print and broadcast media including; research from UCL Institute for Child Health which identifies a rise in anti-obesity drug use in children; and a study

led by researchers at the ESRC Centre for Economic Learning and Social Evolution on the link between financial imprudence and other impulsive behaviour such as overeating, smoking and infidelity. Media coverage is an important and effective method for public engagement, it helps to raise public awareness of research applications, implications and benefits. A particularly valuable route for communication of science is the Cheltenham Science Festival which was founded and is co-directed by UCL's Dr Mark Lythgoe. Proceedings this year featured a large contingent from UCL and have been captured on a video uploaded to UCL's public iTunes U pages and other external channels. The Division of Biosciences recently hosted a visit of students from the London International Youth Science Foundation (LIYSF), this initiative gave the participants a deeper insight into science and its applications.

SLMS will have an ever increasing focus on improving the effectiveness and integration of our education and teaching effort. A SLMS Education Deanery Strategy Away Day was held on 21st September and a report by Jane Dacre will be available in the next issue of the School newsletter.

We are sure that all staff in SLMS will join us in welcoming the arrival of Professor Sir John Tooke as our new Vice-Provost (Health). John has a distinguished record in all aspects of higher education and his experience will make a big difference to UCL. John is now managing to spend a day per week at UCL and will join us full time in January.

Professor Mary Collins
Dean of UCL Faculty of Life Sciences

Professor Ian Jacobs
Dean of UCL Faculty of Biomedical Sciences



Major Initiatives

UCL Partners update

In June the UCL Partners (UCLP) Board announced the appointment of a new Managing Director (Professor David Fish) and six Programme Directors who are all academics with a base in the Faculty of Biomedical Sciences at UCL:

Eyes and Vision – Professor Peng Khaw
Immunology and transplantation – Professor Hans Stauss
Infectious Disease – Professor Deenan Pillay
Neurological Disorders – Professor Alan Thompson
Women's Health – Professor Judith Stephenson
Child Health – Professor David Goldblatt

The Programme Directors will work closely with David Fish UCLP Managing Director, Ian Jacobs UCLP Research Director and when appointed the Directors of Education and Clinical Quality to deliver the vision for UCLP.

The challenge ahead is to make full use of the potential to revolutionise the way that clinical care, research and education are delivered across the partnership. In recent months there has been significant progress with plans to align clinical services, research and training much more closely for the benefit of patient care and related academic activities. The Board has developed strategic priorities which will provide a framework for decision making, laid out the issues that need to be addressed, set timelines in which to reach milestones and set out the criteria by which they can be judged.

Establishing effective working relationships with staff across the partner organisations and with external stakeholders is a priority. Staff within SLMS, and the other partner organisations, have an important role to play in shaping the agenda. UCLP will implement a sound communications strategy. A series of meetings have taken place and the Board will continue to meet with members approximately three times per annum, consistently solicit feedback from staff, and ensure two way dialogue in between the meetings in order to ensure that decision making is informed by as many views as possible and that consultation is linked to strategic development.

Additional themes are in the process of being developed, including Cancer, Population Health, Mental Health, ENT, Oral Health and GI/Hepatology.

UCL Partners Biobanking on the future

Two major new projects at UCL have been initiated to support existing and future research using patient sample collections. A new facility for collection and storage of tissue samples is being created on the Royal Free campus, and an integrated software system is being developed to hold data from existing and future studies.

The UCL Partners BioBank at the Royal Free is a new refurbishment project to provide space for sample handling and storage of blood and tissue products, with the aim of holding up to one million samples. Led by Dr. Mark Lowdell, the facility will bank new and existing holdings of tissues for research and support tissue collections arising from the North London Cancer

Network and other clinical trials. The BioBank has three full-time staff. The new facility will be completed in mid 2010 although the BioBank is already open and samples are now being collected and stored in the existing lab space at RFH. The project is jointly funded by the RFH NHS Charity and a UCL Capital Infrastructure Framework award.

Samples submitted to the BioBank remain the property of the depositor; the bank is a “service” to researchers to facilitate regulatory compliance and to increase potential collaborations. Anyone interested in transferring an existing holding or establishing a new bank should contact the BioBank Facilitator, Kirstin Goldring (k.goldring@ucl.ac.uk) in the first instance.

In order to provide an integrated software system to manage both the new Biobank and existing collections UCL has partnered with GenoLogics, a Canadian provider of translational research informatics. The new software has a number of modules which support freezer and sample management, patient data collection and sample annotation. There will also be a search capability for researchers to query across all studies housed in a ‘virtual’ biobank. A LIMS system for the UCL Genomics labs provides a link from patient sample through to experimental data.

Further details on the UCL Biobank, GenoLogics partnership and UCL Genomics can be obtained from the Platform Technologies Coordinator (j.pallas@ucl.ac.uk).

UCL Partners Biostatistics Network

Biostatistics is a fundamental scientific component of quantitative studies in biomedical research, and it impacts on the design, conduct, analysis and interpretation of such studies. New statistical methods are developed continuously in response to new problems arising in health research and such developments enable the appropriate translation of research into healthcare.

The UCL Partners Biostatistics Network has been established to draw together expertise in biostatistics from across UCL and partner organisations. The network aims to strengthen biostatistics by facilitating collaboration and interaction between the different biostatistics groups/ biostatisticians across UCL Partners, enable best research for best health, and build capacity in biostatistics.

A website has been established to hold information on the research interests and backgrounds of the network members, short courses and MSc modules organised by

the members, and any relevant news items. In addition, an email discussion list has been created to encourage communication and allow the sharing of information and knowledge. The network also provides a forum for organising events and collaborations. Events include a monthly biostatistics seminar series and joint seminars with other biomedical research groups (e.g. Health Services Research, Epidemiology and Public Health). An annual symposium on important topics in biostatistics involving eminent biostatisticians is planned to start in early 2010.

Existing and planned collaborations include MSc programmes in Translational Medicine and Medical Statistics, pre-and postdoctoral fellowships, methodological project grants and the co-ordination of bids to MRC and Wellcome Trust.

Further details can be found at: www.ucl.ac.uk/stats/research/medstats/biostats

Grand Challenges

Professor David Price, UCL Vice-Provost (Research), describes UCL's commitment to the Grand Challenges and their impact on staff within the UCL School of Life & Medical Sciences (SLMS)

You have defined the Grand Challenges as Global Health, Sustainable Cities, Intercultural Interaction and Human Wellbeing. How do they fit into UCL's Research Strategy?

The Research Strategy guides how we structure our research, and has four central tenets. First we have 4,000 outstanding researchers at UCL and the excellence of their activity is key. Then we have the Divisions and Research Departments: they address our teaching needs and provide a discipline-based framework for research. The third area is cross-disciplinary research activity, for example the UCL Cancer Institute; the idea is to give researchers an environment that offers them new intellectual opportunities beyond their own discipline.

The fourth component is the Grand Challenges concept, which we have developed over the past 18 months. We believe UCL has the both the opportunity and the moral obligation to apply itself to problems on a global scale. These problems are complex and systemic, and no single discipline can resolve them. At UCL we can harvest some of the diverse activities happening across the university, combining the knowledge that our research generates in order to develop wisdom – the judicious application of knowledge – that can be applied in each of the Grand Challenges areas. For example, in the area of Global Health we know that many of the illnesses and problems of people in sub-Saharan Africa can be treated by medicine, but they are not able to receive the treatment because of political, legal, economic or social constraints. Solutions to problems like that require an integrated approach. I hope that by bringing together the strength and expertise that exists across the entire university we will achieve a greater impact.

There are now a number of cross-disciplinary thematic institutes, but historically staff have worked within their existing research departments, centres and groups. A truly integrated approach is not the norm within the higher education sector; how do you



see the Grand Challenges changing the way staff in UCL SLMS work?

It's very much up to the individual. I do not want to force colleagues to work in any way that they are not comfortable with. What we are trying to do is to provide opportunities and platforms for those who wish to participate in multidisciplinary activity to do so easily, and we want to provide the resources and support to enable that research to occur and its findings to be implemented. It is very much a value-added activity, to create opportunities where people want to exploit them rather than require people to change affiliations.

Since the challenges encompass all areas – from Anthropology to Cell & Developmental Biology – how will you ensure that you engage fully with all staff, when they naturally feel connected to 'familiar' structures and may be reluctant to engage with the unknown?

Communications is always a challenge at UCL. We are trying to create communities of people who have expressed a willingness to engage in these areas. Typically, we arrange an open meeting and invite people from across the university to participate in the forum. Opportunities and synergies tend to emerge. In Global Health, for example, we had open meetings approximately 18 months ago, there's been an ongoing series of symposia, and we now have a community working on different thematic areas, each with academic leadership.

People in universities are busy and sometimes sceptical; they have to see that there is something in it for them and for the institution in order to participate. The UCL Lancet Commission on Managing the Health Effects of

Climate Change is an example of some of the additional value that this activity can generate. We brought together academics from about 20 departments, to use their breadth of expertise to reflect on the evidence and propose pathways to mitigate and adapt to climate change. Their peer-reviewed report took up most of an issue of the Lancet, has been widely quoted in the media, and was discussed at meetings of Commonwealth Health Ministers and at the WHO meeting in Geneva. Now we are engaging with NGOs and others to influence policy and practice.

The impact of UCL's academics working across disciplines on this project was far greater than any one of the individuals could have achieved by writing their own article. The additional impact is good for the individual, good for the research community, good for the institution and, most importantly, good for the people of the world.

The Grand Challenges 'door' is wide open to anyone in UCL SLMS who is intrigued by the notion that their expertise can generate more impact in collaboration than it can alone.

Since the Lancet Commission has there been increased enthusiasm from staff and a greater commitment to get involved in these cross-disciplinary activities?

It certainly has helped. We can use the Lancet Commission as an example to colleagues in other disciplines. Those who've seen it recognise that we can have an impact on government and international policies; they can see a tangible example, which then helps them to think about how they might do that in their own subject areas. We're developing other pan-UCL exercises in Sustainable Cities, and will do so in the other Grand Challenges as they mature.

But our activity doesn't only occur on such a large scale; simply connecting two people who might not otherwise collaborate can enrich UCL's intellectual atmosphere, as well as develop the potential to improve lives around the world, in big or small ways.

Staff across UCL SLMS will naturally recognise their potential roles in the Grand Challenges of Global Health and Human Wellbeing, but what contribution can those from the School make in the areas of Sustainable Cities and Intercultural Interaction?

In Sustainable Cities we are currently doing a lot of work on the problems of the urban environment in health, relating to urban health and the design of environments, but also areas like the building of healthy hospitals. The

urban environment is where more than half the world's population live so we have to make sure that it is a healthy one. In Intercultural Interaction colleagues are working in migration and the movement of populations which have major impacts on quality of life.

One cross-disciplinary theme we are developing at the moment is Risk & Disaster Reduction. We have people working on pre- and post-earthquake, tsunami and hurricane actions, from engineering, geophysical, legal and medical perspectives, among others. Maintaining global health after natural disasters is absolutely vital.

How do the Grand Challenges fit with the UCL SLMS themes?

For example, Child & Adolescent Health and Women's Health map onto Global Health activities. Work related to cancer and other individual health issues are central to Human Wellbeing, which engages people from the neurological nature of aesthetics – the work that Professor Semir Zeki is involved in – to depression and clinical health, through to genomics and protein databases. Evolution & Environmental Biology and Population Health clearly have roles to play in Sustainable Cities, while expertise in Human Communication can be brought to bear on Intercultural Interaction.

How will issues that are relevant to more than one Grand Challenge work in practice?

I believe the Grand Challenges are a bit like the Olympic rings: they overlap, and they are part of the framework of the university. They are individually definable but they are not mutually exclusive and so it is very much a spectrum of activity. The titles encapsulate four different aspects of some of the problems that the world faces but of course none of them are isolated. Individuals who find themselves active in one area which might be 'badged' as a Global Health issue may also be involved in a Human Wellbeing problem or a Sustainable Cities project. Such connectivity is central to the whole idea of the Grand Challenges.

How do you see the relationship between the Grand Challenges and our biomedical partnerships - the UK Centre for Medical Research & Innovation (UKCMRI) and UCL Partners (UCLP)?

In the UKCMRI there are a number of research areas that cut across the physical and life sciences, and feed into fundamental medical research. With an emphasis on cross-disciplinary research we can develop computational biology and computational medicine into applications that span wave equation to

patient treatment, for example. It exemplifies our cross-disciplinary approach. In some respects UCLP is an opportunity for addressing the four Grand Challenges in microcosm. North Central London has a very global and diverse population; therefore some of the medical issues that relate to the genetic variations of populations are reflected in the community we serve. Issues in Sustainable Cities – such as Professor Sir Michael Marmot and colleagues' work on the social determinants of health – relate to the demographic interaction with healthcare in our local community. Intercultural Interaction is reflected in the diversity of the population in north London, for example the challenges of addressing sexual health education in different ethnic communities in London will require knowledge of different cultural norms. Finally Human Wellbeing at the individual level is what the partnership aims to deliver to every patient that it encounters. In that respect UCLP is an exemplar of Londoners being given the opportunities of enjoying UCL's global vision.

What plans are in place to liaise with external organisations?

We are intent on engaging with, learning from and influencing external agencies, not least because they are key to implementing the knowledge being generated by our 4,000 outstanding researchers. With others, my office is working on developing these relationships and ensuring that UCL's expertise has impact on government and non-government organisations, charities and international bodies. We have a team working on policy issues and presentations in order to augment our existing activities.

With these big initiatives there is always a danger of loss of momentum. Have you set milestones and how will you monitor progress to ensure that you are on track?

We have set annual objectives, detailing what we want to achieve in the context of an output like the Lancet Commission. At this stage we are setting milestones on activity in the Grand Challenges – their delivery is being monitored by Advisory and Executive Groups. We also have specific objectives about meetings with opinion formers. It's a programme with long-term aims: to some extent the outcomes will be assessed only in a few years time when UCL carries out its regular analysis of external stakeholders – through the UCL Development & Corporate Communications Office – and we determine the extent to which UCL's visibility and influence has increased.

In these challenging economic times some will argue

that we need to focus on our financial wellbeing institutionally and nationally rather than on these Grand Challenges. What would you say to them?

Institutionally we have to maintain our financial health, but part of the success of our institution is our ability to attract students and researchers from overseas. Therefore it is essential that UCL maintains its international profile. The Grand Challenges aren't something we do instead of our core work; they are a natural extension. As I said before, I believe UCL has a moral obligation to apply itself to global issues, but it's also good for us: being seen internationally as a global institution will help to ensure our long-term stability. As far as the national stability goes, the Grand Challenges programme is concerned with the essential ingredients: the sustainability of its economy, the stability of its infrastructure and the health of its society.

Find out more about the Grand Challenges:
www.ucl.ac.uk/grand-challenges

Research Focus

Researchers conduct innovative targeted lung cancer trials

Principal Investigator, Dr Siow Ming Lee (Consultant, UCLH, and Honorary Clinical Senior Lecturer, UCL Cancer Institute) and a team of researchers based at UCL and UCLH are conducting innovative targeted lung cancer trials in the UK. The ET, TOPICAL, TACTIC, Study 12 and 14 trials, supported by Cancer Research UK and based at UCL/CRUK trial centre, could lead to improvements in existing treatments for lung cancer, the development of more effective therapies, and an increase in the survival rate and quality of life for those with the disease worldwide.

Lung cancer is the most common cause of cancer death in the UK. Each year more than 38,000 people are diagnosed with lung cancer in the UK and it claims more than 34,000 lives (Cancer Research UK). Globally, 1.4 million new cases are diagnosed each year and claiming more than 1.1 million lives (J Clin Oncol 2006;24(14):2137-50). Better treatments are urgently needed.

ET - ERCC1 Targeted Trial

The recommended treatment for non-small cell lung cancer (NSCLC) is a platinum-based chemotherapy. Some patients benefit from treatment with platinum drugs, while in others treatment may be detrimental and patients also develop unwanted side-effects including emesis, deafness, and kidney and nerve damage. ERCC1 is a DNA protein which repairs damage induced by platinum chemotherapy. ET, a new phase III trial, will compare platinum and non-platinum chemotherapy

following ERCC1 stratification in patients with advanced NSCLC, in an attempt to prospectively validate ERCC1 as a predictive marker for chemotherapy response.

Dr Lee explained: "This trial is the largest randomised prospective customised study examining the role of ERCC1 to treat patients with advanced NSCLC. The trial will also collect serum and paraffin-embedded tumour blocks from all participating patients in an attempt to identify new proteomic or molecular biomarkers for selecting patients who are most likely to benefit from chemotherapy. The next step is to use these identified molecular signatures to individualise chemotherapy treatments in the future. We hope to recruit 1300 patients in three years from 80 – 100 UK centres. This is the first customised chemotherapy trial for lung cancer in the UK and has excited many UK lung cancer oncologists because it combines a targeted chemotherapy approach and also uses the latest most effective chemotherapy regimens to treat lung cancer in the NHS, having the potential to change practice."

TOPICAL

TOPICAL is a phase III, randomised, placebo-controlled trial testing whether oral Tarceva (erlotinib), which targets a cell surface receptor called epidermal growth factor receptor (EGFR), can improve survival for poor performance NSCLC patients who are too ill to receive conventional chemotherapy because of advanced cancer and/or associated cardiovascular and pulmonary co-morbid complications. Binding of the receptor by the circulating epidermal growth factor induces cancer growth and spread. In parallel

to the ET clinical trial, this trial also collects blood and tumour samples from participating patients, forming one of the largest tumour bio-banks from any single trial. They will provide the platform for a translational proteomic and genomic biomarkers analysis to identify markers for activity and toxicity. The study is now closed, it successfully recruited the planned 670 patients, and is currently being analysed at the trial centre

Dr Lee explained: "Tarceva has fewer side effects than chemotherapy and TOPICAL patients should be able to tolerate them. Tarceva has already been approved for second line treatment and as maintenance treatment following chemotherapy in unselected good performance patients. It would be useful to demonstrate similar survival benefits with this less well population. It also has a bolt-on translational study examining putative markers which could pave the way to predict which patients are most likely to benefit from the drug."

TACTIC

TACTIC is an ongoing phase II randomised trial testing Tarceva in combination with cranial radiotherapy to treat patients with NSCLC that has spread to the brain. The aim of the trial is to find out if Tarceva combined with radiotherapy to the brain is a better treatment than radiotherapy on its own. Tumour specimens and paired serum samples will also be collected from patients for a separate translational study in an attempt to find predictive genomic signatures for activity and biological behaviour explaining why these NSCLC patients develop brain metastases.

Dr Lee said: "Brain metastases are

New Grant Success

a major problem in NSCLC because up to 40% of lung cancer patients will develop brain metastases following diagnosis. We hope that this research will significantly increase survival in brain metastases patients because of Tarceva's ability to cross the blood-brain barrier to exert anti-brain metastases and radio-sensitisation activities when combined with whole brain radiotherapy. It is already well established that Tarceva has activity against primary lung cancer and extracranial metastatic sites"

Study 12 and 14

Study 12 and 14 are trials in small cell lung cancer (SCLC) and NSCLC which have completed recruitment. Researchers hoped to use the blood limiting properties of thalidomide to help lung cancer patients by starving the blood supply to tumours. Study 12 was selected for oral presidential presentation and Study 14 proffered paper presentation at the 2007 World Conference on Lung Cancer in Seoul, Korea. The pilot trial in SCLC attracted widespread media attention.

Professor Chris Boshoff, Director of UCL Cancer Institute, said: "Dr Siow Ming Lee is now an international figure in conducting large randomised lung cancer studies. His research has changed clinical practise in the UK for lung cancer. The clinical studies of anti-EGFR treatment for lung cancer could also eventually result in personalised therapy for this disease."

Dr Lee's biography: www.uclh.nhs.uk/GPs+healthcare+professionals/Consultants/Dr+Siow-Ming+Lee.htm and: <http://info.cancerresearchuk.org/cancerandresearch/ourcurrentresearch/researchbygrantee/lee/%20>

We are indebted to all our sponsors, without their continuing support we would not be able to undertake world class research. Listed below are details of research projects above £500,000 with a start date of 1st May - 31st August. The awards, from a variety of sources, support a wide range of research across the School. SLMS Staff can obtain details of all awards on the School website: www.ucl.ac.uk/slms/research/current-projects.

► Dr Antonella Riccio
MRC Laboratory for Molecular Cell Biology
£2,525,794.00
MRC
Novel Mechanisms of Gene Expression in Developing Mammalian Neurons

► Professor Jane Dacre
Division of Medical Education (DOME) - ACME
£1,919,613.00
GENERAL MEDICAL COUNCIL
GMC Project

► Professor Caroline Sabin
Division of Population Health
Research Department of Infection & Population Health
£1,755,832.19
MRC
The Clinical Outcomes, Response to Treatment and Epidemic Dynamics of HIV-1 in the UK

► Professor Patricia Salinas
Division of Biosciences
Research Department of Cell & Developmental Biology
£1,496,716.00
MRC
Role of WNT Signalling in Synaptic Maintenance and Behaviour

► Dr Derek Gilroy
Division of Medicine
Research Department of Metabolism & Experimental Therapeutics
£1,481,973.00
WELLCOME TRUST

Novel Resolution-Phase Macrophages Restore Post-Inflammation Tissue Homeostasis

► Professor Kerry Chester
Cancer Institute
Research Department of Oncology
£1,229,638.88
EPSRC
Bio-Functional Magnetic Nanoparticles: Novel High-Efficiency Targeting Agents for Localised Treatment of Metastatic Cancers

► Professor Stuart Cull-Candy
Division of Biosciences
Research Department of Neuroscience, Physiology & Pharmacology
£1,127,351.00
WELLCOME TRUST
Tarp Regulation of Neuronal and Glial Calcium-Permeable Ampars in Health and Disease

► Professor Dmitri Rusakov
Institute of Neurology
Research Department of Clinical & Experimental Epilepsy
£1,006,084.00
MRC
Nano-diffusion in the brain

► Professor Anthony Segal
Division of Medicine
Internal Medicine
£995,363.00
WELLCOME TRUST
Studies into The Molecular Causes of Crohn's Disease

► **Dr Goya Wannamethee**
Division of Population Health
Research Department of Primary
Care & Population Sciences
£989,660.00
BRITISH HEART FOUNDATION
Pathways to Prevention And
Prediction of Cardiovascular Disease
and Associated Disability in Older
Men: The British Regional Heart
Study

► **Professor Andrew Copp**
Institute of Child Health
ICH - Neural Development
£966,256.00
GREAT ORMOND STREET
HOSPITAL SPECIAL TRUSTEES
Investigation into the Diagnosis,
Pathogenesis and Treatment of
Crouzon-Related Craniosynostosis
Syndromes

► **Dr Stephen Hart**
Institute of Child Health
ICH - Molecular Immunology
£753,664.00
EPSRC
Nanoparticles for the Delivery of
Therapeutic Agents to The Brain for
Treatment Of Dementias

► **Professor Richard Watt**
Division of Population Health
Research Department of
Epidemiology & Public Health
£715,353.00
FOOD STANDARDS AGENCY
Exploratory and Developmental
Trial of a Family Centred Nutrition
Intervention Delivered in Children's
Centres and the Home Environment

► **Professor Steve Hunt**
Division of Biosciences
Research Department of Cell &
Developmental Biology
£700,066.00
MRC

Local Translation of mRNA in
Primary Afferent Fibres and the
Regulation of Nociception

► **Professor Stephen Wilson**
Division of Biosciences
Research Department of Cell &
Developmental Biology
£679,812.00
WELLCOME TRUST
A Forward Genetic Approach to
Identifying Critical Regulators Of
WNT/Beta-Catenin/TCF Signalling
During Brain and Eye Development

► **Dr Nikhil Thapar**
Institute of Child Health
ICH - Neural Development
£607,918.00
MRC
Using Key Models for Developing
Stem Cell-Based Therapies For
Aganglionic Gut Disorders

► **Dr Dipak Kalra**
Division of Population Health
Centre Health Informatics &
Multiprofessional Education
£559,160.99
MRC
Enhanced Information Technology
Framework and Public-Patient
Involvement in UK National HIV
Databases

► **Dr Steven Schofield**
Nanotechnology
Nanotechnology
£523,135.00
EPSRC
Fellowship: Dr Steven Schofield
- Molecular Functionalisation of
Semiconductor Surfaces

► **Dr Mala Maini**
Division of Infection & Immunity
Immunology
£521,179.00
MRC
Bim-Mediated Attrition of Virus-
Specific CD8 T Cells in Chronic HBV
Infection

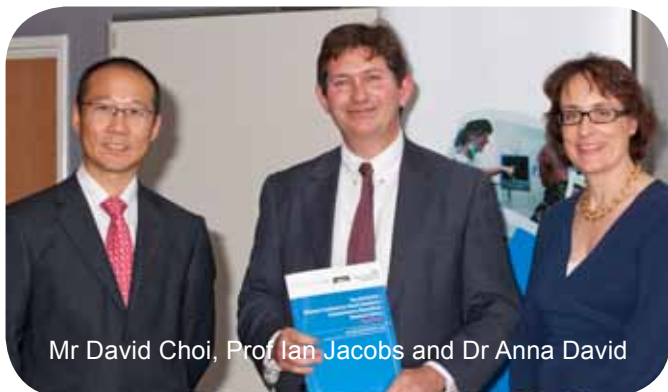
► **Dr Bernard Khoo**
Division of Medicine
Metabolism & Experimental
Therapeutics

£515,656.00
MRC
Lowering LDL Cholesterol Levels
by Antisense Oligonucleotide
Induced Alternative Splicing of
Apolipoprotein B

► **Dr Ines Pineda Torra**
Division of Medicine
Cardiovascular Medicine
MRC
£512,778.00
Role of LXR Alpha Phosphorylation
in Macrophage Activation and
Atherogenesis

Research News

UCLH/UCL research showcase a success



Mr David Choi, Prof Ian Jacobs and Dr Anna David

In September UCLH and UCL showcased their translational research during an open event in London to mark the second anniversary of the UCLH/UCL National Institute for Health Research Comprehensive Biomedical Research Centre (CBRC). The centre has been at the forefront of research into some of the major causes of illness and disease-related deaths since it was established in 2007.

The event turned a spotlight on to the projects that are driving forward UCL and UCLH's translational research programme, the centres of excellence within UCL and the leading academics who are advancing these areas of study. A range of research was showcased – highlights include transplanting stem cells found in the nose to potentially heal nerve and spinal injuries; a new non-invasive procedure that could reduce the severity of heart attack and exploring the use of gene therapy to treat severe fetal growth restriction – this research is a small example of the research carried out by CBRC. A dedicated session on hot research topics for the UCL Partners Academic Health Science Centre included presentations from the Specialist Biomedical Research Centres of Great Ormond Street / UCL Institute of Child Health and Moorfields / UCL Institute of Ophthalmology, as well as from the Royal Free Hampstead. The session highlighted how pro-active collaboration across UCL Partners is helping to enhance the strength of UCLP research and the development of research-led clinical services.

More than 240 leading clinicians, researchers and policy makers attended the event which included contributions

from with two distinguished plenary speakers – Professor Dame Sally Davis, Director General of Research and Development and Chief Scientific Advisor for the Department of Health and NHS and Professor Lord Darzi of Denham PC, KBE, the Global Ambassador for Health and Life Sciences, and Chair of NHS Global Forum.

Professor Ian Jacobs, Director of the CBRC, said: "Our open event is an opportunity to showcase some of the pioneering research at UCLH/UCL which has led to UCL being the most cited research institution in the UK. Our research team shares a determination to work collaboratively to translate research progress in to advances in health care. Since its creation, the centre has focused on a range of advances in medical research that will have a direct impact on patients' care and quality of life, and will also save many lives. These include cancer, cardiac disease, infectious disease, women's health, oral health and neurological diseases such as epilepsy, stroke and multiple sclerosis."

CBRC is one of five funded by the Department of Health's National Institute for Health Research (NIHR) and enables UCLH and UCL to train the next generation of researchers. A key component is the collaborative approach between UCLH and UCL to bring together the work of hundreds of scientists, doctors, nurses and allied health professionals.

Molecular Interactions facility in the Research Department of Structural & Molecular Biology (SMB)

The Molecular Interactions facility is located in the sub-basement of the Darwin Building. It is equipped with two analytical ultracentrifuges (AUC), a Biacore surface plasmon resonance X100 instrument (SPR), and a dual polarisation interferometer (DPI). These are interfaced with two levels of computer backups in order to archive data permanently, as well as offering state-of-the-art molecular graphics for visualising proteins. A mass spectrometer that handles small proteins is also available. The facility is a regular user of the X-ray and neutron scattering instruments at ESRF in Grenoble and ISIS at the Harwell Research Complex.

This equipment enables staff to study protein interactions with a broad range of ligands, either in solution (AUC and scattering), or on surfaces using sensor chips (SPR and DPI); they can determine dissociation constants and on-off rates. The DPI machine is the newest instrument

and the facility hopes to commission this by the start of 2010. The DPI method is reported to be more than SPR – e.g.: they are able to follow metal binding to proteins, and in addition they can follow shape changes as well as mass changes during the interaction on the sensor chip. These complementary methods are generally powerful, and were used to secure an MRC grant for Professor Steve Perkins early this year. The combination of these methods is an even more powerful tool that resolves ambiguities. One of Steve's PhD students won a poster prize at a recent AUC conference in Uppsala, Sweden by combining AUC with SPR and scattering to study the interactions between complement Factor H and C-reactive protein.

Contact details and practical issues for new grant applications are available on the Division of Biosciences website: www.ucl.ac.uk/biosciences/research-facilities

UCL Institute of Cardiovascular Sciences

A new UCL Institute of Cardiovascular Science (ICS) has been created within the Division of Medicine, Faculty of Biomedical Sciences and Professor William McKenna has been appointed as Director. The ICS will work to link with over 400 cardiovascular scientists from across the campus (e.g. in the Rayne Institute, the Wolfson Institute, Institute of Ophthalmology, Institute of Child Health, Faculty of Life Sciences and on the Royal Free Campus) with expertise in basic and translational cardiovascular medicine. The focus is on the life course of disease (i.e. from cradle to grave) for congenital and genetically determined

myocardial and structural heart disease and vessel wall disease, with particular emphasis on prevention and outcomes (Department of Epidemiology & Public Health). The activities of the ICS will provide the translational research which will be the cornerstone of the cardiovascular theme within UCL Partners, the partnership of clinicians and scientists whose primary aim is to provide innovation and improvements in the quality of healthcare delivery locally, as well as influencing national and international policy.

Motherhood in the 21st century - conference

Professor John Carroll and Professor Sammy Lee (UCL Division of Biosciences, Research Department of Cell and Developmental Biology) organised a meeting to discuss the issues around becoming a mother in the 21st century. The meeting was aimed at public engagement and brought together basic scientists, clinical scientists from the NHS and private practice, anthropologists (including Ruth Mace, UCL Research Department of Anthropology), philosophers and ethicists from the UCL community and beyond. The meeting was opened by Professor Sir Robert Winston. This was followed by a series of short lectures from experts from the many disciplines listed above. The meeting with over 100 delegates then moved to an open forum chaired by Ray Noble (UCL Institute for Women's health). A diverse and enthusiastic and discussion followed with much interest in many related topics including, the biological limits of fertility and underlying causes of subfertility in 35-45 year old women, fertility treatment of older women and whether there should be an upper age limit, and the ethics of oocyte

donation. Jane Dempster (Research Department of Genetics, Evolution & Environment), who pulled the meeting together at very short notice, came in for endless praise for her organisational abilities.

Researchers win grant for research into new epilepsy treatments

Professor Matthew Walker (UCL Institute of Neurology) and Dr Robin Williams (Department of Biological Sciences at Royal Holloway, University of London) have been awarded £415,234 by the National Centre for Replacement, Refinement and Reduction to fund research into identifying new epilepsy treatments. Epilepsy affects at least 40 million people worldwide, making it the most common serious neurological condition in humans. To date there have been rapid advancements in understanding how epilepsy occurs and in identifying new treatments using animal experimentation, but Professor Walker and Dr Williams are aiming to advance our understanding of epilepsy using a different method of research.

Professor Walker said: "The approach we will be using is a novel and exciting way of identifying a whole new array of epilepsy treatments whilst minimising animal experimentation."

Valproic acid (VPA) is one of the most widely prescribed drugs to treat epilepsy, but it is not clear how it works. Progress has already been made using the social amoeba *Dictyostelium* to identify bipolar disorder treatment targets in animals, and has improved our understanding of the cellular effects of the acid.

Dr Williams will use the amoeba

Dictyostelium to probe further how VPA works on fundamental cellular pathways and then to identify new potential treatments. Professor Walker will then test these new treatments in the laboratory using in vitro models of seizure activity to identify the treatments that are potentially most effective in the treatment of epilepsy.

Further information is available at: www.ucl.ac.uk/news/news-articles/0907/09073001

Researchers win grant to study attitudes to swine flu

A team of UCL researchers has won a grant from the NHS National Institute for Health Research (NIHR) to study public attitudes to swine flu. After vaccination, changing behaviour such as hand and respiratory hygiene is the second most effective method of preventing the spread of flu. It is also key to limiting the severity of illness by, for example, persuading people to use the National Pandemic Flu Service or take antivirals as prescribed.

The government wants to target specific behaviours to fight the spread of swine flu and influence people's attitudes and beliefs about the virus. Professor Susan Michie (UCL Division of Psychology & Language Sciences), Dr Henry Potts (UCL Centre for Health Informatics and Multiprofessional Education), and Professor Robert West (UCL Research Department of Epidemiology & Public Health) are leading the research, which has three main objectives:

- to analyse the Department of Health (DH) swine flu public attitudes and behaviour survey to

examine how far behaviour can be understood in terms of specific beliefs and emotional responses.

- to assess how far behaviour, beliefs and emotional responses vary with socio-economic and other demographic variables, geographic area, and over time.
- to assess the effect of NHS/DH communication initiatives and media/new media coverage on behaviour, beliefs and emotional responses.

Further information is available at: www.ucl.ac.uk/news/news-articles/0908/09082501

Team awarded grant to improve interactive medical devices

A team of researchers led by Professor Ann Blandford from the UCL Interaction Centre (UCLIC) has been awarded a £5.8m grant from the Engineering and Physical Sciences Research Council to improve the usability and safety of interactive medical devices. The EPSRC grant, CHI+MED, (Computer-Human Interaction for Medical Devices) is a major new project to improve devices that have a user interface and are designed to be used by people without extensive technical training, such as infusion devices, glucometers and vital signs monitors. The CHI+MED team involves investigators from Swansea University, City University, the Royal Free Hospital, the Singleton Hospital and Queen Mary, University of London.

Medical errors in the UK are estimated to kill or seriously injure 74,000 a year. Many of these involve mistakes using interactive medical devices, so the ease of use and

reliability of such devices is critical. Incorrectly setting a device up or incorrectly making readings can result in incorrect treatment, even patient death. Good design can often prevent such mistakes being possible in the first place. Reliance on interactive medical devices is growing, both in clinical settings and, increasingly, for patients without direct clinical supervision. For example, pumps give drugs for treatment and pain relief of cancer patients, while glucometers measure blood sugar levels for diabetics.

CHI+MED will improve safety by a scientific approach to understanding and designing out errors. That involves studying not just device interfaces but on the way people use them in a given context. CHI+MED will study the design and use of devices, in both controlled settings and in hospital and home settings.

Further information is available at: www.ucl.ac.uk/news/news-articles/0909/09090402

Team wins grant to develop synthetic artery

A team of researchers from UCL has won a £500,000 grant to develop a synthetic artery that mimics a natural artery - and could revolutionise the treatment of coronary heart disease. Professor Alexander Seifalian (UCL Division of Surgery & Interventional Science) and Professor George Hamilton (UCL Surgery & Interventional Science and Royal Free Hospital) and their team will use the Wellcome Trust grant to take their work from the laboratory to a pre-clinical trial. The team has been developing a new nanomaterial with mechanical properties similar to that of human arteries. The nanomaterial's inner surface has been modified to attract stem cells from blood circulating inside the body. It converts these primary cells to endothelial cells, a type of cell that covers the interior of the natural blood vessel and protects it from blockage. The breakthrough offers hope for sufferers of heart disease who are unable to donate suitable substitute blood vessels for bypass surgery.

Professors Seifalian and Hamilton, experts in nanotechnology, regenerative medicine and vascular surgery, explained: "Coronary heart disease is a condition where one or more blood vessels of the heart become narrowed or blocked. This causes the heart muscle to be starved of oxygen causing damage often leading to a heart attack and muscle death. This interferes with the heart's ability to pump blood around the body, leading to infirmity and possibly death. The current treatment of the disease is to create a new route for blood to circulate, most often by balloon dilatation and stent (stent angioplasty). In many

patients however this intervention cannot be performed and in this situation an operation called bypass surgery is needed which can either use substitute blood vessels from another part of the patient or made from a plastic material."

"Unfortunately, up to 30% of patients cannot supply their own vessels and the plastic vessels currently available are not suitable for the small diameter vessels in the heart; because of this most surgeons will not use them. The prognosis for the patient under these circumstances is at best a reduced quality of life. We have developed an alternative using a new nanocomposite polymer with similar mechanical properties to that of human arteries. The result for the patient will be a synthetic vessel which we believe will function as well as the patient's own blood vessels - allowing surgeons to successfully operate on patients who cannot donate their own blood vessels."

If the nanomaterial performs as well as or better than a natural vessel, it could be used for all patients, removing the need for harvesting the patient's own blood vessels and reducing the length and complication rate of bypass surgery. There would also be advantages in treatment of arterial disease elsewhere in the body where stent angioplasty or bypass surgery is needed.

Professors Seifalian and Hamilton and their group are working closely with UCL Business (UCLB), who are providing vital regulatory support to ensure pre-clinical milestones are sensitively reached smoothly and the route to clinical trials is as efficient as possible. UCLB is also identifying industry partners to commercialise the technology. Depending on the success of the preclinical trial, the team aim to take their work to clinical trial in early 2011.

Further information is available at: www.ucl.ac.uk/news/news-articles/0908/09081101

Deafness Cognition & Language Research Centre recognised for expanding deaf people's access to society

The Deafness Cognition & Language Research Centre (DCAL) at UCL has been shortlisted for a national award for its significant contribution towards building a society in which deaf people have full access.

Signature, the qualifications awarding body for signed languages and other methods of communication used by deaf and deafblind people, has shortlisted DCAL for an 'Organisational Achievement' award in a national awards scheme launched this year. The Signature Annual Awards aim to recognise outstanding achievement by those who have made a significant contribution towards a society in which deaf people have full access.

DCAL is a world-renowned centre of excellence for research on British Sign Language, with deaf people and Deaf culture firmly at the centre of its work. Further information is available at: www.dcal.ucl.ac.uk/



Research Highlights

Application of innovative laser research could lead to earlier bone disorder diagnosis

A new laser technique that could lead to bone disorders being diagnosed earlier is to be tested in a hospital for the first time. The study, which it's hoped will pave the way for future clinical trials, will apply a revolutionary approach known as SORS (Spatially Offset Raman Spectroscopy), to examine specific substances in non see-through surfaces deeper than has previously been possible, without damaging the surface. The research team hope ultimately that the method can be used both to detect and screen for early signs of diseases such as osteoarthritis and osteoporosis.

“This exciting new approach has been developed by combining expertise in multidisciplinary research collaboration over a number of years. This has now culminated in a system for minimally invasive assessment of skeletal tissues and could with further development - form the basis of a rapid safe economical screening system for musculoskeletal disease”, said Professor Allen Goodship (UCL), the project Principal Investigator.

The basic technique, devised and patented in the Central Laser Facility at the Science and Technology Facilities Council (STFC), was developed for this application through ongoing collaboration with the Institute of Orthopaedics and Musculoskeletal Science, UCL. The concept has been evaluated on bone samples with

differing chemical composition but never before in a hospital on patients - as will happen in the next few years. Professor Pavel Matousek who is an STFC physicist and an honorary Professor at UCL is the lead inventor of the technique, he says; “The new method effectively suppresses otherwise blinding interfering signals from skin, making it possible to see subtle chemical changes within all the components of bone through the skin, without the need for a biopsies. The new approach is also able to provide far more information than conventional X-ray based systems that are limited to the mineral components only. The data can be related to the chemistry of bone tissue in its entirety and the analytical chemistry side of the work is supported by STFC’s Professor Tony Parker, head of the Lasers for Science Facility at the Central Laser Facility and also an honorary Professor at UCL.

This translational phase of the research has been made possible by a £1.7 million grant awarded by the Engineering and Physical Sciences Research Council (EPSRC) and through an ongoing partnership with UCL which demonstrated the feasibility of applying this technology to bone composition and with the Royal National Orthopaedic Hospital (RHOH) in Stanmore, Middlesex where the trials will take place. “This project adds to the ongoing role of the RNOH to lead in innovative approaches to the management of complex musculoskeletal disease. This project has the potential to provide a means of detection and confirmation of some of the rare bone disorders that are still difficult to diagnose. It could make significant contributions to reducing the burden of musculoskeletal disease and

associated chronic pain experienced by these patients” said Dr Richard Keen, a co-investigator and consultant rheumatologist at RNOH.

Whilst the technique is promising, it has to be fully understood. If these trials are successful it may take several years for the method to become fully realised for diagnostic use in the mainstream health service.

Nano-magnets guide stem cells to damaged tissue

Microscopic magnetic particles have been used to bring stem cells to sites of cardiovascular injury in a new method designed to increase the capacity of cells to repair damaged tissue, UCL scientists announced today.

The cross disciplinary research, published in *The Journal of the American College of Cardiology: Cardiovascular Interventions*, demonstrates a technique where endothelial progenitor cells - a type of stem cell shown to be important in vascular healing processes - have been magnetically tagged with a tiny iron-containing clinical agent, then successfully targeted to a site of arterial injury using a magnet positioned outside the body.

Following magnetic targeting, there was a five-fold increase in cell localisation at a site of vascular injury in rats. The team also demonstrated a six-fold increase in cell capture in an *in vitro* flow system (where microscopic particles are suspended in a stream of fluid and examined to see how they behave). Although magnetic fields have been used to guide cellular therapies, this is the first time cells have been targeted using a method directly applicable to clinical practice. The technique uses an FDA (US Food and Drug Administration) approved agent that is already used to monitor cells in humans using MRI (magnetic resonance imaging).

Dr Mark Lythgoe, UCL Centre for Advanced Biomedical Imaging, the senior author of the study, said: “Because the material we used in this method is already FDA approved we could see this technology being applied in human clinical trials within 3-5 years. It’s feasible that heart attacks and other vascular injuries could eventually be treated using regular injections of magnetised stem cells. The technology could be adapted to localise cells in other organs and provide a useful tool for the systemic injection of all manner of cell therapies. And it’s not just limited to cells - by focusing tagged antibodies or viruses using this method, cancerous tumours could be much more specifically targeted.”

This work was supported by the UCL Institute of Child Health (Child Health Research Appeal Trust), The British Heart Foundation, the Alexander S. Onassis Public Benefit Foundation and the Biotechnology and Biological Sciences Research Council (BBSRC).

Further information is available at: www.ucl.ac.uk/news/news-articles/0908/09081701

Study reveals what we see out of the corner of our eye

Researchers at UCL have found that when it comes to our vision, objects are hard to identify when we look at them using the corner of our eye because our brain tends to assume the world is regular and cannot deliver more than a simplified sketch.

Known as ‘crowding’, this is a problem for millions of people who have lost their central vision through eye disease such as glaucoma and are forced to use the edges of their visual field to perform everyday tasks such as reading or recognising their friends. Despite ‘crowding’ affecting more than 95% of the visual field, little is known about how it works apart from the fact it does not happen in the eye, but in the parts of the brain that deal with seeing.

Led by Dr Steven Dakin and John A Greenwood (UCL Institute of Ophthalmology) and Dr Peter Bex (Schepens Eye Research Institute at Harvard Medical School), the research was published in the *Proceedings of the National Academy of Sciences*. It found that this problem is exaggerated when looking at objects within a cluttered image. An example would be reading individual words in a page of text. This is very difficult to do unless we look straight at the words.

Dr Steven Dakin said: “By understanding crowding we can reveal much more about how the visual brain works, which will also reveal the best way to present television images, text and the internet, so that people with eye disease can get the most out of them.” It had previously been assumed that crowding makes us worse at recognising things by making our vision somehow more haphazard or random, but the study counters this. The research showed that people’s judgment of the appearance of letter-like objects was altered by nearby objects in a very predictable way. Computer modelling of their results showed that ‘crowding’ is actually a process that makes the world appear more regular by ‘blending’ nearby objects together.

The tendency of the brain to assume that the world is regular may have evolved because fewer cells in the brain are devoted to the edges of our vision (compared to the centre).

Further information is available at: www.ucl.ac.uk/iioo/news.php

Study: sound waves treat prostate cancer with fewer side effects

A group of 172 men with prostate cancer that had not spread were treated under general anaesthetic with High-Intensity-Focused Ultrasound (HIFU), which uses sound waves to kill cancer cells. The men taking part in the trial were discharged on average five hours after receiving the HIFU treatment. Typically men with prostate cancer are treated with either surgery or radiotherapy. Surgery usually requires a two- to three-day inpatient stay and radiotherapy requires daily treatment as an outpatient for up to one month.

Of the initial group, 159 men were followed up a year later and 92 per cent did not have any recurrence of prostate cancer. Although this was not a comparative study, it would be expected that traditional treatments for early prostate cancer of surgery or radiotherapy would show a similar percentage of men showing no recurrence of their prostate cancer one year on. Less than one percent - one man of the 159 followed up - had incontinence. And 30-40 per cent had impotence. None had any bowel problems. One year following the traditional treatments of surgery and radiotherapy it would be expected that 5-20 per cent of patients would have incontinence and half have impotence. Radiotherapy can also cause side effects such as diarrhoea, pain and bleeding in 5-20 per cent of people treated. The trial took place at two centres in London: UCLH and the privately owned Princess Grace Hospital.

Dr Hashim Ahmed from UCL's Division of Surgical and Interventional Science ran the trial. He said: "This study suggests it's possible that HIFU may one day play a role in treating men with early prostate cancer with fewer side effects. But we don't yet know for sure if HIFU is more effective than traditional treatments so it will be important to carry out further studies involving a larger number of patients followed over a longer period of time to truly compare the long term effectiveness of this treatment."

High-Intensity-Focused-Ultrasound or HIFU uses high-frequency sound waves to heat small accurately

targeted amounts of tissue to a temperature of 80-90 degrees Celsius. It can be used to treat the whole prostate, as in this study, or just the cancer areas.

Professor Peter Johnson, Chief Clinician at Cancer Research UK, said: "This technique needs careful evaluation to make sure that it can produce the same results as the proven treatments for early prostate cancer. Cancer Research UK is funding a trial to look at this question and we hope that further studies can be carried out to compare HIFU to standard treatments."

Further information is available at: www.ucl.ac.uk/news/news-articles/0907/09070201

Poor money saving linked to general impulsiveness

Financial imprudence is linked to other impulsive behaviour such as overeating, smoking and infidelity, according to a new study led by UCL researchers, published in the journal *Personality and Individual Differences*.

The study, conducted through the BBC website with over 40,000 participants, measured people's financial impulsivity by asking whether they would prefer to receive £45 in three days or £70 in three months. The survey asked a related series of questions about other behaviours. Nearly half of those who responded preferred the smaller-sooner sum of money, and these people were more likely to show a raft of other impulsive behaviours.

Dr Stian Reimers, ESRC Centre for Economic Learning and Social Evolution at UCL, says: "One of the big questions about people's financial planning is whether decisions to spend or save come from personal knowledge and experience of money matters or whether they reflect someone's personality more generally.

"Our research shows that people with an impulsive money-today attitude ignore the future in other ways. For example, they are more likely to smoke and more likely to be overweight, which may reflect a preference for immediate pleasure of nicotine and food over long-term good health. People who chose to take the smaller-sooner amount of money were also more likely to admit to having had an affair in recent years, suggesting another manifestation of desire for immediate gratification."

The study controlled for age, education and income, and found that those most likely to make impulsive financial choices were young, poorly educated, and on lower incomes.

Dr Reimers continues: "Given that those who decline £70 in three months in favour of £45 in three days are essentially turning down an interest rate that's hundreds of times what they'd get on the high street, this may begin to explain why some people are reluctant or unable to save money.

"Learning to make decisions that lead to long-term happiness, not just instantaneous gratification, could benefit us all. Simple techniques can help reduce impulsivity: like imagining how you'd feel about your decision in a year's time, or trying to avoid making decisions in the heat of the moment."

Further information is available at: www.ucl.ac.uk/news/news-articles/0909/09090302

Study: promising alternative to invasive post-mortem

A study led by Dr Sudhin Thayyil from the UCL Institute of Child Health published in *The Lancet* has shown that a less invasive approach to post-mortem is effective in the diagnostic study of small human foetuses. It is hoped that the breakthrough approach, which uses high resolution (also known as high-field) Magnetic Resonance Imaging (MRI) offers an alternative to traditional autopsy - an invasive technique that is subject to low rates of parental consent in the UK. Post-mortem examination is key to giving experts an understanding of why foetuses don't survive in pregnancy and contributes to the development of improved assessments for antenatal diagnosis.

Whole-body MRI was performed on 18 foetuses of less than 22 weeks gestation before a traditional autopsy was performed. Images from the MRI were compared with the findings of invasive autopsy and assessed for diagnostic accuracy and image quality by a team of specialist paediatric radiologists.

Dr Sudhin Thayyil, a researcher at UCL Institute of Child Health and the Cardiology unit at Great Ormond Street Hospital for Children NHS Trust, led the preliminary study. He explained the results: "Overall, the diagnostic data from high-field MRI was similar to that provided by the invasive autopsy in these selected cases. In some

cases, the data was even of a superior quality."

With 'high-field' MRI it may be possible to obtain high quality images for diagnosis of structural defects. This method offers particular advantages for investigating the heart and brain, due to the complexity of these organs and difficulty with traditional techniques.

This preliminary study is part of an ongoing, larger scale project that aims to develop a complete minimally invasive autopsy. However, many diagnoses will always require tissue to be obtained and examined under the microscope, and imaging techniques like MRI will not be able to serve this purpose.

Neil Sebire, Professor of Paediatric and Developmental Pathology at Great Ormond Street Hospital, said: "We recognise that this is an emotive area of research and the subject of post-mortem examination will always remain extremely difficult for grieving parents. However, it is our hope that this type of advancement towards a less invasive examination will help to make this process a little easier for families and contribute to an increase in consent rates for autopsy research."

Further information is available at: www.ucl.ac.uk/news/news-articles/0908/09080701

Researchers work on UN report, recommendations and guidelines for the inclusion of persons with disabilities within the Millennium Development Goals

Professor Nora Groce of the Leonard Cheshire Disability and Inclusive Development Centre, UCL, recently chaired the 'United Nations Expert Group Meeting on Mainstreaming Disability in the Millennium Development Goals' (MDGs) at the World Health Organization Headquarters in Geneva. The meeting, co-sponsored by the Department of Economic and Social Affairs in the UN Secretary General's Office and the World Health Organisation brought together eleven experts on disability policy and selected representatives from United Nations agencies, as well as from governmental and non-governmental organizations. Currently there is no attention to persons with disabilities in the MDGs, despite the fact that an estimated 1 in 5 of the world's poorest people are disabled. Professor Groce and the staff of UCL's Leonard Cheshire Disability and Inclusive

Development Centre have been asked by the UN to work closely with staff to draft a formal Report and set of recommendations and guidelines for inclusion of persons with disabilities as part of the current review of the MDGs scheduled for 2010 and as part of the planning now underway in the UN for the scheduled revision of the MDGs in 2015.

Further information about the Mainstreaming Disability Meeting is available at: www.un.org/disabilities/default.asp?id=1470. Further information about disability and the MDGs is available at: www.includeeverybody.org

Study led by UCL scientists finds that milk drinking started in central Europe and not in more northern groups

The ability to digest the milk sugar lactose first evolved in dairy farming communities in central Europe, not in more northern groups as was previously thought, finds a new study led by UCL scientists published in the journal PLoS Computational Biology.

The genetic change that enabled early Europeans to drink milk without getting sick has been mapped to dairying farmers who lived around 7,500 years ago in a region between the central Balkans and central Europe. Previously, it was thought that natural selection favoured milk drinkers only in more northern regions because of their greater need for vitamin D in their diet. People living in most parts of the world make vitamin D when sunlight hits the skin, but in northern latitudes there isn't enough sunlight to do this for most of the year. In the collaborative study, the team used a computer simulation model to explore the spread of lactase persistence, dairy farming, other food gathering practices and genes in Europe. The model integrated genetic and archaeological data using newly developed statistical approaches.

"Most adults worldwide do not produce the enzyme lactase and so are unable to digest the milk sugar lactose," says Professor Mark Thomas, UCL Research Department of Genetics, Evolution and Environment. "However, most Europeans continue to produce lactase throughout their life, a characteristic known as lactase persistence. In Europe, a single genetic change (13,910*T) is strongly associated with lactase persistence and appears to have given people with it a big survival advantage. Since adult consumption of fresh milk was only possible after the domestication of

animals, it is likely that lactase persistence co-evolved with the cultural practice of dairying, although it was not known when it first arose in Europe or what factors drove its rapid spread."

Many reasons have been put forward for why being able to drink fresh milk should be such an advantage. For example, milk can compensate for the lack of sunlight and synthesis of vitamin D in skin at more northern latitudes, since vitamin D is required for calcium absorption and milk provides a good dietary source of both nutrients. Milk also provides a calorie- and protein-rich food source, comes in a relatively constant supply compared to the boom-and-bust of seasonal crops, and would have been less contaminated than water supplies.

"Our study simulated the spread of lactase persistence and farming in Europe, and found that lactase persistence appears to have begun around 7,500 years ago between the central Balkans and central Europe, probably among people of the Linearbandkeramik culture. But contrary to popular belief, we also found that a need for dietary vitamin D was not necessary to explain why lactase persistence is common in northern Europe today," Professor Thomas continues.

Further information is available at: www.ucl.ac.uk/news/news-articles/0908/09082801

Excellence in Medical Education Awards 2008-9

UCL Medical School's Quality Assurance Unit is delighted to announce the winners of the third annual Excellence in Medical Education Awards. These awards promote the recognition of excellence in teaching and the facilitation of medical student learning. This year, the winners hailed from the Faculties of Life Sciences and Biomedical Sciences, as well as from the Division of Primary Care and Population Health and some of our NHS trust teaching partners.

Particular mention must be made of the winners of our two special awards: the David Jordan Award was given to **Dr Greg Campbell** for his exceptional development of teaching in Phase 1, and the Saad al-Damluji Award was given to the team of **Dr Zaheer Mangera**, **Dr Paul McGovern** and **Mrs Pratibha Kothari** for their outstanding innovation in clinical teaching and revision.

The full list of award winners: **Dr Greg Campbell**, Senior Teaching Fellow, Dept of Cell & Developmental Biology, **Dr Peter J Delves**, Reader in Immunology, Division of Infection and Immunity, **Miss Celia Ingham Clark**, Consultant Surgeon, Undergraduate Lead for Surgery, Whittington NHS Trust, **Dr Jayne Kavanagh**, Lecturer in Medical Education, Academic Centre for Medical Education, **Miss Bryony E Lovett**, Consultant Surgeon, Basildon & Thurrock University Hospital NHS Foundation Trust, **Dr Qaiser Malik**, SpR Radiology, Basildon & Thurrock University Hospital NHS Foundation Trust, **Mr Duraisamy Ravichandran**, Undergraduate Tutor and Consultant Surgeon, Luton & Dunstable Hospital NHS Foundation Trust, **Dr Ashley Reece**, Consultant Paediatrician, Watford General Hospital, West Hertfordshire Hospitals NHS Trust & Honorary Senior Lecturer, Institute of Child Health, **Dr Joe Rosenthal**, Senior Lecturer in General Practice, Sub-Dean for Community Based Teaching, Dept of Primary Care & Population Health, **Dr Noreen Ryan**, GP Tutor, Dept of Primary Care & Population Health, **Dr Elsysa Speechly-Dick**, Consultant Cardiologist and Clinical Lead for Teaching, Honorary Senior Lecturer, UCL Hospitals NHS Foundation Trust, **Dr Adam Wander**, GP Tutor, Dept of Primary Care & Population Health. Finals Teaching & Revision Programme Team - **Dr Paul McGovern**, Year 1 Foundation Doctor, Basildon & Thurrock University Hospital NHS Foundation Trust and Honorary Clinical Teacher, **Dr Zaheer Mangera**, Year 1 Foundation Doctor, Basildon & Thurrock University Hospital NHS Foundation Trust and Honorary Clinical Teacher, **Mrs Pratibha Kothari**, Year 5 Manager, UCL Medical School.

It is a principle of an organisation committed to teaching and learning, to seek to identify and reward those making an outstanding commitment to students and their education.

Excellence in Medical Education Awards 2009-10

The proposed deadline for submission of applications is Monday, 15th February 2010. These awards are open to healthcare professionals and administrators with the aim of providing a tangible means of recognition of exceptional contribution to education in any phase of the MBBS programme. Please see the QA website for details: www.ucl.ac.uk/medicalschoo/quality/

UCL Eastman Dental Institute (EDI) receives educational grant from the International Team for Implantology (ITI)

Professor Nikolaos Donos, Periodontology Unit, UCL Eastman Dental Institute (EDI), has been awarded an educational grant of £150,000 from the International Team for Implantology (ITI). The award, made by the ITI's University Programmes Committee, will fund the development of an ITI Centre of Excellence at EDI which will deliver an intermediate level continuing education course in implant dentistry. The award places EDI in the global elite in terms of implant dentistry education. The course will be delivered by the faculty from the Units of Periodontology, Prosthodontics and CPD. A team at EDI (Professor Stephen Porter, Mr. Geoffrey Dunk, Professor Andrew Eder, Ms Anita Graham, Dr Christos Louca, Mr. Naresh Pindolia and Ms Karen Widdowson) assisted with the preparation of the successful bid.

Statistical courses

UCL Institute of Child Health and Great Ormond Street Hospital offer a range of statistical courses designed for health professionals who require an understanding of research methodology and statistical analyses. These courses will help health professionals to interpret published research and/or undertake their own research studies. Courses include: Analysis of 2x2 tables, Introduction to dealing with missing data, Introduction to research methodology and statistics, Logistic regression, Regression analysis, Sample size estimation and power calculations and Survival analysis. Further information is available at: www.statistics-courses.info.

Medical students successfully complete Three Peaks Challenge

UCL medical students successfully completed the Three Peaks Challenge to raise money for the London HEMS Air Ambulance Service. The group climbed Ben Nevis, Scafell Pike and Snowdon, a total of 3407m, in 23 hours 40 minutes. The summit party comprised Damian Bruce-Hickman (year 1); Will Cobb (year 3); Clare Warrell (year 4); and Max Friedman (year 5), who recently completed a SSC with the HEMS crew. Dan Swerdlow (RUMS Clinical President) drove approx. 1200 miles, transporting the climbers to the correct locations. The students aim to raise £3000 for the vital emergency response service that the helicopter provides to Londoners.

Medical student wins prize for essay on coping with disfigurement

Second-year UCL medical student Charlie Khoo has taken the joint top prize in an essay competition open to health professionals, graduates and undergraduates on the theme of coping with disfigurement. Charlie's essay 'Perceptions of Beauty in a Western Society' won him £500 in the competition run by Changing Faces, a UK charity that supports and represents people who have disfigurements of the face or body from any cause.

Further information (and a copy of the prize-winning essay) is available at: www.ucl.ac.uk/news/news-articles/0907/09070602

New £5 million research design service for London

The National Institute for Health Research (NIHR) Research Design Service for London was launched at an Open Day at the City Hall. The Research Design Service (RDS) London is a collaborative project, led by King's College London, in partnership with UCL, Imperial College and Queen Mary University of London.

The RDS provides advice and guidance to clinicians and academics preparing research proposals for submission to peer-reviewed funding competitions. It is focused on supporting applications for funding from NHS researchers and those working in partnership with the NHS. Priority is given to those applying for NIHR Research for Patient Benefit (RfPB) funding. For more information about RDS London please visit www.rdslondon.co.uk

New Advanced IT Support Centre (AISC)



The new Advanced IT Support Centre (AISC) was formally launched by Professor Ian Jacobs on the 3rd August. The AISC brings together IT staff and resources from across the Faculty into one strategic grouping, which was one of the key recommendations of the Biomedicine Administrative Review. The aims of the AISC are to provide uniformly world class IT resources, support and services to all members of the Faculty; supporting all research, administrative and teaching activities. Over the coming months we will be reducing duplication, improving resilience and governance and making better use of central IT services. This will free up resource to allow us to provide consistently high levels of user support and IT services across the Faculty, and also to focus on value added and advanced services for research and teaching.

The Director of the AISC is Mr Sammy Massiah, who since his appointment was announced in mid August has been busy meeting IT staff and users across the Faculty. Sammy and the Senior Management Team (pictured), and all AISC staff welcome your comments on this exciting new initiative (particularly if you are planning projects where new IT resources are needed). We will be making further announcements and providing more information about plans, services and progress once our background research has been carried out. In the mean time, please contact the AISC via Sammy on s.massiah@ucl.ac.uk, or your Departmental IT staff.

Interview

Peter Mobbs

**Professor of Physiology and former
Dean of the Faculty of Life Sciences**



Tell us about your career to date?

I did my undergraduate degree in Zoology and Comparative Physiology at what was then Queen Mary College London University, I went on to complete a PhD at the same institution when it was known as Queen Mary Westfield College – it's now called Queen Mary, University of London. I seem to be one of the few people left that started their career in neuroscience working on invertebrates. I was interested in simple nervous systems and what they could tell us about more complicated ones. My PhD was on the nervous system of the honeybee, and I did a lot of work on the anatomy of the honeybee brain and the bee visual system. Then I went on to do a post-doc with the Overseas Development Administration at a London-based government research institute, the Centre for Overseas for Pest Research (COPR). At that time the Centre for was run by Reg Chapman, he wrote one of the best known text books on entomology called *The Insects - Structure and Function*. The post-doc at COPR offered three years during which you could do almost anything you wanted in the way of research on invertebrates. The Overseas Development

Administration had a particular interest in trying to fix some of the problems in developing countries around insect pests, and while at the time I wasn't particularly interested in the more applied aspects of entomology, they were very happy for me to spend my three years pursuing my interest in insect behaviour and the insect nervous system.

There were a couple of spells abroad – I spent several summers at the Free University, Berlin and I was a regular visitor to Woods Hole Marine Laboratories in the States, I also worked at Hunter College in New York. I became an SERC Research Fellow and went back to Queen Mary for a period, then I got a temporary lectureship at UCL where I've been for the last 28 years. Within a very short time I was appointed to a permanent lectureship in what was then the Department of Physiology, run by Tim Biscoe, I was then promoted to Reader and then to Professor. I became the Deputy Head of the Department of Physiology about 15 years ago and was appointed Head of Department approximately ten years ago. I then became Dean of the Faculty of Life Sciences and have been in this position for the last five years.

What is your career highlight?

My most recent highlight involved working with Ed Byrne. Ed and I had a very close working relationship; I don't think that there was anything of any significance over which we disagreed. He was a great chap to work with – exceptionally able and smart – we did the best we possibly could to try to integrate basic biological research with more translational work within the School. I would probably list establishing the School of Life & Medical Sciences as our greatest achievement. I hope the School will make it easier for basic scientists to become involved in science relevant to medicine and that it will continue to be a broad enough church to encompass all of the interests of the members of the Faculty of Life Sciences - which spans everything from Linguistics to Structural Molecular Biology. I think that the School's work will increasingly offer opportunities for staff within SLMS to work with colleagues in Mathematical and Physical Sciences, Engineering Sciences and other faculties within UCL and at external institutes. David Price, the Vice-Provost (Research), is as interested as I am in seeing that Life Sciences has the opportunity to interact closely with other faculties. Only through interdisciplinary research can we begin to address the problems the world faces over the next decade.

Other highlights - I very much enjoyed working at the bench with David Atwell, which I did for pretty much all

the time that I've been at UCL. I recall sitting in the dark making micro-electrode voltage clamp recordings from cone receptors. A lot of people know how to make high quality electrical recordings but not many people know how to do this in complete darkness! It was always great fun to work with Dave, he is an outstanding scholar, physicist and mathematician, I learnt a great deal from him and I hope he learnt something from me.

What are the challenges facing the School and what are your hopes for it over the coming years?

The challenges are changing with opportunities for funding. Over the past fifteen years we have enjoyed something of a golden age. The politicians have smiled upon us and provided very significant money for things like new buildings. With the banking crisis the good times have probably come to an end. We need to find a way to continue to move forward in the absence of funds like CIF that have enabled new buildings like the Andrew Huxley and the Cancer Institute. We also need to make sure that excellent basic, fundamental research goes on being done in an era when the government has made it clear that it wants universities to become increasingly engaged with industry and medicine. If you don't do basic research there is nothing to translate. I hope that we can find a way to continue to do the same volume of basic research and that the government comes to understand that if you don't fund basic discovery then in a very short while you are going to run out of the very kind of things that they seem to think are important – things that are immediately applicable to medicine, immediately applicable to engineering and so on. To my mind – basic fundamental research remains as important as it ever was – perhaps even more important.

I hope the School continues to operate on the same kind of collegiate basis as it has in the past with people co-operating, working together to exploit all the opportunities from the funding that is on offer. We recently saw an MRC Health and Wellbeing initiative led by Nick Tyler, a Civil Engineer. I think that it is very important that members of both the Faculty of Biomedical Sciences and Life Sciences are alive to the fact that science in the future is going to have to address problems rather than being devoted to a single discipline. Even basic research is increasingly interdisciplinary and requires skills from across the piece. The boundaries that existed within and between the two faculties prior to Ed arrival just aren't appropriate, we need to find ways to work together in order to be more than the sum of the parts. Change is never a straightforward process, it is natural to feel connected to the 'familiar/known' but the risks of standing still are greater than those of moving

forward in a new direction and in order to retain our position as one of the worlds leading universities it is essential to change the way we work.

UCL has a reputation for research excellence, it needs to develop the same reputation for teaching quality. I believe that it is a huge privilege to teach, I can't understand why anybody would want to try to avoid teaching undergraduate or masters students. It is incredibly rewarding. Some of the most memorable moments over the past 30 years or so have been when students have come up to me and thanked me for helping them learn or helping them in a tutorial capacity – finding a career or obtaining a place on a PhD. I think UCL has been overly focused on research, obviously we can't drop our sights on research but we can raise them where teaching is concerned and I'm sure that under Jane Dacre's leadership the Education Deanery within the School will be a vehicle to ensure that teaching develops to the same extent as research. UCL has a fantastic wealth of talent in terms of its staff and we need to make the most of them in the teaching we provide. Students want to come to UCL because we enjoy a world-class reputation in research and we draw students from 150 nations across the globe. When they get here they must find high quality research-led and research-based teaching. I believe that by using all of the talent available within the School we can push our teaching to new heights without overburdening our staff.

What other activities are you involved?

On the academic front I've also been involved in teaching and learning across UCL, working with Michael Worton, Vice-Provost (Academic & International). I was responsible for the development of innovations in Learning and Teaching and for the past five years ran ESCILTA, UCL's focus for providing funds to support innovative approaches to teaching and learning. Through the enthusiasm of the people on that committee I hope we were able to improve the status of teaching and learning at UCL and to convince a fairly conservative university to adopt some interesting, and novel approaches to teaching, learning and assessment. For example, with input from ESCILTA and help from UCL's Information Systems Division we were able to launch UCL I-Tunes. I'm a great believer in the use of multi-media in education, I think it is exciting opportunity for students, it adds new dimensions to the ways in which students can learn, present their work and be assessed. I think we are too fixated on the 'three hour unseen written examination'. It is important that we develop new ways to assess students that don't disadvantage the very many who come from overseas. I think that no

matter how good you are at the English, if it is your second language, having to write a three hour unseen examination, does not give you the same opportunity to reveal your talents as a native speaker. It is a talent to be able to write well but equally there are many other ways of being creative and demonstrating understanding. We ought to look at how we can bring out all the talents of our students and to make sure that they are rewarded for those that are relevant to their future employment and their chosen area of study.

In terms of non-academic activities – not many people know that I was a dressage rider, I had my own horses, but I had to abandon this hobby 12-13 years ago when I no longer had time to commit to it. I was a moderately competent rider and won a number of competitions. I no longer ride - it is hard to go back to doing something that you used to be reasonably good at but haven't practiced for a long time. I'm also interested in photography; cinema; and music – particularly world and jazz music. I am interested in journalism and writing, indeed, I once consider being a journalist and I have quite a few friends who are reporters.

What are your plans for the future?

My plan for the next year is to do almost nothing at all except maybe travel and think about what it is that I would like to do. I'm considering something in the not-for-profit sector, particularly in the higher education area, perhaps trying to help those who come from less educationally privileged background to improve their chances of getting to university. I am a great admirer of organisations like the Sutton Trust, which aims to improve educational opportunities for young people and progress social mobility. Too many people rush into something once retired only to give it up when they have a better understanding of what it involves – maybe they've done some sailing and decide to sail across the Atlantic, they get half way and meet their first storm force winds and decide it was an error – I don't want to make that mistake.

News in brief

UCL professor shortlisted for BMA Medical Book Awards

24 Recent Advances in Surgery 31' (co-edited by UCL's Professor Irving Taylor) was shortlisted for the 2009 BMA Medical Book Awards. The title, which was highly commended, is updated every year. It covers the latest

trends within surgery and reflects any changes to the professional examinations for surgeons. It includes sections on training and techniques, general abdominal surgery, vascular surgery and current evidence and is published by the Royal Society of Medicine Press Ltd.

Professor Taylor is Director of Medical Studies and Vice Dean of UCL Medical School.

Royal Society 2010 Anniversary Research Professorship

Professor Jon Driver, former Director of the UCL Institute of Cognitive Neuroscience and a Principal Researcher at the Wellcome Centre for Neuroimaging at UCL, has been awarded a Royal Society 2010 Anniversary Research Professorship. These prestigious posts provide long-term support for internationally recognised scientists of outstanding achievement and promise. Previous holders of Royal Society Research Professorships include five Nobel Laureates and five Presidents of the Royal Society.

International neurobiology prize for Professor Stephen Wilson

Professor Stephen Wilson (UCL Research Department of Cell & Developmental Biology) has received the 2009 Remedios Caro Almela Prize in Developmental Neurobiology for his team's work on the development of the zebrafish brain. The Neuroscience Institute of the Miguel Hernandez University of Alicante, Spain awards the prize annually in recognition of the scientific work of a European investigator who is in a highly productive period of their scientific career, making significant contributions to the area of developmental neurobiology.

Scientists from pain research lab win awards and appointments

Three pain researchers from one laboratory in UCL Neuroscience, Physiology & Pharmacology have won prestigious awards and two postdoctoral scientists from the same laboratory have secured lectureships at high-profile UK universities.

Professor Maria Fitzgerald's laboratory focuses its research on how children process and learn to cope with pain and the effectiveness of pain-relieving drugs in infants.

- Dr Rebecca Slater – won a EFIC-Grünenthal Grant 2009 for her work on cortical pain processing in human infants using EEG and fMRI. Dr Slater is an MRC-funded postdoctoral scientist.
- Dr Suellen Walker – awarded the 2009 IASP Young Investigator Award in Pediatric Pain for her basic laboratory and human research on inflammatory and surgical pain in infants and the long-term consequences of pain in early life. Dr Walker is Clinical Senior Lecturer in Paediatric Anaesthesia and Pain Medicine at Great Ormond Street Hospital.
- Ms Lucie Low – awarded the 2009 IASP John J. Bonica Trainee Fellowship to learn brain imaging in Cathy Bushnell's lab at McGill University, extending her PhD studies on the developmental interaction between pain and reward processing in the brain. Ms Low is a Wellcome Trust London Pain Consortium PhD student.
- Dr Gareth Hathway – appointed as a lecturer in Neuroscience at Nottingham University where he will continue his research on the development of brainstem control of infant pain using in vivo neuropharmacology and electrophysiology. Dr Hathway is an MRC & Wellcome Trust-funded postdoctoral scientist.
- Dr Rachel Ingram – appointed as a lecturer in Pharmacology at Oxford University where she will continue her research into the synaptic development of pain circuits in the spinal cord using in vitro and in vivo patch electrophysiology. Dr Ingram is an MRC & Wellcome Trust-funded postdoctoral scientist.

Sport and Exercise Medicine (SEM) expert joins UCL

Eleanor Tillet (Principal Clinical Teaching Fellow & Honorary Consultant, Sport & Exercise Medicine) joined UCL Division of Surgery & Interventional Science in September 2009 to teach on the new MSc programme in Sports Medicine, Exercise and Health. Dr Tillet is also providing medical support for Team GB at the Vancouver Winter Olympics. Commenting on her appointment and the new MSc programme Dr Tillet said: "With Sport and Exercise Medicine (SEM) recognised as an NHS speciality in 2005 and the London 2012 Olympics just around the corner, what better time to be launching a new MSc course in Sports Medicine, Exercise and Health? As a former competitive figure skater I suppose

it was almost inevitable that I was drawn towards SEM and I have just completed my specialist training. There is much happening already within this field at UCL and UCLH but lots to develop too and I look forward to being a part of this. We are not just starting a new MSc, but there are plans underway to role it out as distance learning course and to develop an intercalated-BSc. This should link in well too with the move of the part of the British Olympic Medical Services to UCLH.

Outside of my UCL work I have been the team doctor for Figure Skating for the last six years and have worked with various other elite sports, including England Women's Football and a trip to the 2009 World University Games in Belgrade. I'm off to Vancouver next year for the Winter Olympics as part of the medical support for Team GB. For the last few days I have been on a recce trip with the British Olympic Association and it promises to be an amazing event and hopefully our most successful Winter Games ever. Preparing our students to work in such an environment is a key part of the MSc, but SEM isn't all about elite sport as our course demonstrates. The role of exercise in preventing and treating disease has been described as the 'golden bullet' of medicine and we hope to equip our students with just as much knowledge about promoting physical activity as treating musculoskeletal injury. So, exciting times for SEM within UCL!"

New Leadership in the School of Life & Medical Sciences

Professor Sir John Tooke

As Vice Provost (Health), Professor Sir John Tooke will develop and initiate the implementation of strategy for all biomedical and life sciences activity across the UCL School of Life & Medical Sciences. Professor Tooke comes to UCL from the Peninsula College of Medicine and Dentistry, where he is Dean and where he has particular responsibility for leadership of the research strategy.

Commenting on his appointment Professor Tooke said: "I am delighted to have been appointed Vice Provost (Health) at UCL at this exciting point in the University's development. UCL has a pre-eminent academic record in biomedical and life sciences with high quality teaching informed by leading edge research. UCL's major initiatives – the new Academic Health Sciences Centre, UCL Partners (UCLP), and the UK Centre for Medical Research and Innovation (UKCMRI) are tremendously important for the Nation and will ensure UCL remains at the forefront of global medical research. UCLP presents a powerful means to harness the biomedical research and teaching strengths of UCL to benefit patient care in London and beyond. UKCMRI is a unique opportunity to establish a world leading biomedical research powerhouse with huge translational and career development capacity.

As we realise the potential of these exciting developments we will need to respond to the challenging economic times we are entering for both health and education. Economic recovery will rely to a significant degree on life sciences research and innovation and in this we must play our part through strategic prioritisation and the forging of the most effective collaborative partnerships with industry funders and the health sector. Over the next few years the impact of research endeavour, the translation of research into health, economic and social gain – will become ever more important. But whilst contributing to this agenda in a major way, we must also nurture the basic research effort that is both the traditional strength of UCL and the source of the societal gains of tomorrow. Getting the balance right and owned and understood by the School will be crucial to our continued success. My confidence in such a successful outcome is bolstered by the strength of the School's senior management team, in particular Mary Collins, Ian Jacobs, Jane Dacre and Andrew Whalley. It has been a great privilege to have led the development of the Peninsula College of Medicine and Dentistry to this

point. I look forward to the new challenge at UCL, which I will take up full time in January, with similar sentiments and great enthusiasm."

Professor Tooke graduated in Medicine from Oxford in 1974 and was a Wellcome Trust Senior Lecturer in Medicine and Physiology and Honorary Consultant Physician at Charing Cross and Westminster Medical School before moving to Exeter in 1987. Until 1 November 2000 he was Consultant Physician with interests in diabetes, endocrinology and vascular medicine at the Royal Devon and Exeter Hospital NHS Trust, and Professor of Vascular Medicine at Exeter University. He led the bid for the development of the Peninsula Medical School and was appointed inaugural Dean in 2000. In 2006 he also led the successful bid for the development of the Peninsula Dental School, the first new Dental School in the UK for 40 years.

Professor Tooke is immediate past chair of the Medical Schools Council and currently chairs the UK Healthcare Education Advisory Committee. He recently led a High Level Group for the Chief Medical Officer on Overcoming Barriers to Clinical Effectiveness, and at the beginning of 2007 was invited by the Secretary of State to lead an Independent UK Inquiry into Modernising Medical Careers, the final report for which was published in January 2008. Professor Tooke is also a Member of the reconfigured National Institute for Health Research Advisory Board, and the DH HIEC Project Board. He was knighted in the 2007 New Year's Honours list for Services to Medicine.

Professor Mary Collins

Professor Mary Collins took up the role of Dean of Life Sciences at the beginning of September 2009. Mary Collins has been Professor of Immunology at UCL since 1997. She became Director of the UCL Division of Infection & Immunity in 2003, having served as Head of UCL Immunology & Molecular Pathology from 2000 to 2003. Professor Collins runs a research team whose goal is to engineer viruses for experimental and clinical gene delivery. Recently they have produced the first stable packaging for lentiviral vectors, and have investigated the use of lentiviral vectors as cancer vaccines. Collins has published over 100 peer reviewed original research papers in the areas of cell signalling and gene delivery, she currently holds approximately £3.5 million in peer reviewed research funding and teaches immunology and virology to medical and life science students.

Commenting on her appointment Professor Collins said

"It is a great privilege to be appointed Dean of the Faculty of Life Sciences; the constituent research departments have outstanding reputations as pre-eminent centres of teaching, learning and research, this is reflected in academic league tables and in the recent RAE success, however changes to funding mean that it is a pivotal time for our faculty. In this difficult economic climate we must make the right strategic decisions in order to maintain our international standing. Our success will be based on the vision and energy of staff within the Faculty. I look forward to working with colleagues in order to enhance our profile and to build on the achievements of Professor Peter Mobbs."

Professor Ian Jacobs

Professor Ian Jacobs became Dean of the Faculty of Biomedical Sciences in July 2009. He first moved to UCL and UCLH in 2004 as Professor of Gynaecological Cancer Surgery, to set up and direct the new UCL Institute for Women's Health. Since 2006, as Research Dean and Director of Research & Development (R&D) he has led on the merger of UCL, UCLH and Royal Free R&D, the successful bid for a UCLH/UCL Comprehensive Biomedical Research Centre and the establishment of the UCL and NHS partners' Health Sciences Research Deanery. Most recently he led on the presentation to the Department of Health for the UCL Partners Academic Health Sciences Centre. Professor Jacobs directs a laboratory and clinical research team with grant awards of over £30m from the Medical Research Council, Cancer Research UK and Department of Health, focused on molecular genetics, proteomics and screening for cancer. He is principal investigator on several large multicentre clinical trials including UKCTOCS, a randomised trial of ovarian cancer screening involving 202,000 women and the UK Familial Ovarian Cancer Screening Study.

Leadership, Governance and Management in the Faculty of Biomedical Sciences (FBS)

A number of changes in the leadership, governance and management of the Faculty of Biomedical Sciences (FBS) have been introduced in the new academic year. These include Vice Dean appointments as well as the establishment of a Faculty Executive Team and Faculty Board. The aims are to establish clear lines for decision making within the Faculty, increase the opportunity for Divisional/Institute Directors to engage in decision making and planning at Faculty level and facilitate links with the broader UCL and NHS environment (e.g. the

UK Centre for Medical Research & Innovation and UCL Partners).

The appointments to Faculty Vice Dean roles are as follows:

- Alan Thompson has taken on the new role of Vice Dean/Deputy Head of Faculty and he will play a key role in delivering the academic mission for FBS.
- Jane Dacre has agreed to continue in her role as Vice Dean (Education) at a crucial time in the development of DOME and the Education Deanery.
- Salvador Moncada has taken on the role of Vice Dean (Research) bringing to this key role his scientific reputation and the ability to organise our research endeavour effectively for the benefit of all that he has demonstrated in leading on developing our platform technologies over the last two years.
- Patrick Maxwell will take on the new role of Vice Dean (Experimental Medicine), to build on recent progress in establishing a team and infrastructure for our drug development pathway, which will link science in FBS and other UCL faculties with translational/clinical efforts in UCLP.

The Vice-Deans will be core members of the Faculty Executive Team which will meet on a weekly basis with Ian Jacobs, the new Dean of FBS. In addition the Institute/Divisional Directors and the Heads of Faculty Administration will meet every two weeks at a new Faculty Board.

The existing Faculty Senior Management Group is a larger group which will meet on a three monthly basis. These arrangements will enable FBS to link effectively with the structure established by Mary Collins in the Faculty of Life Sciences (FLS) and with the plans Sir John Tooke has for the School of Life & Medical Sciences (SLMS). Ian Jacobs, Mary Collins and Sir John Tooke will meet on a regular basis to ensure that both Faculties and the School are well aligned and well placed to deal with the challenges and opportunities of the next few years.

Academic Events

Listed below are details a small selection of events. As these events are subject to change, it is always advisable to confirm details in advance with the named contact. A full listing of events is available on the website: www.ucl.ac.uk/slms/

15 October 2009, 13:15

Why psychiatry has to be social?

Professor Paul Bebbington
(UCL Mental Health Sciences)

Professor Bebbington explores the idea that psychiatry has an essentially social component because the phenomenon it seeks to explain have inherently social attributes. Psychiatric symptoms relate to our internal experience of external reality, and therefore comprise elements of both the internal and external world. A full account of psychiatric disorder must invoke the interaction of biological and social factors, acknowledging that the balance between these factors will vary between individuals.

Location: Darwin Lecture Theatre, UCL, Gower Street, London WC1E 6BT

Further information: www.ucl.ac.uk/lhl/

20 October 2009, 13:15

The new biology of ageing

Professor Dame Linda Partridge
(UCL Genetics, Evolution and Environment)

Research into ageing has been rejuvenated by the discovery that genetic alterations extend the lifespan of laboratory animals. These mutations keep animals healthy for longer and protect them from many of the diseases of ageing. Professor Partridge will look at how this and other discoveries have led to a new wave of research directed at understanding how these changes can increase healthy lifespan in humans.

Location: Darwin Lecture Theatre, UCL, Gower Street, London WC1E 6BT

Further information: www.ucl.ac.uk/lhl/

9-11 November 2009

Innovations & Progress in Healthcare for Women Prevention, Screening and Risk Prediction in Women's Health

2nd International Meeting

Royal College of Obstetricians and Gynaecologists,
London, UK

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This unique event will be hosted by two institutions, **UCL EGA Institute for Women's Health** and the **Royal College of Obstetricians and Gynaecologists (RCOG)**, which are both renowned for their position at the forefront

of innovation in healthcare for women. The Meeting will bring together experts in adjacent and interdependent fields, and will be structured according to the following four themes.

- Cancer
- Fetal and Neonatal
- Obstetrics
- Reproductive Health and Cross-disciplinary

The Meeting has been designed not only to facilitate knowledge exchange and networking, but also to act as a platform for debate and decision-making which will suggest future directions in Prevention, Screening and Risk Prediction in Women's Health. Dedicated expert panel discussions on Day 3 will focus on the following topical areas.

Cancer Panel – Breast Cancer Screening

Screening for the most common women's cancer in high-income countries – current problems considered and a consensus sought, drawing up a 5-year roadmap of strategies.

Obstetrics, Fetal and Neonatal Panel – Changing Models of Antenatal Care

Where next in early risk identification of pregnancy complications? A debate on how to change antenatal care provision to allow translation of the latest research into practice.

Lifestyle Panel – Lifecourse Approach in Women's healthcare

Debating the potential for redesigning healthcare delivery to finally move it away from compartmentalising women's health according to medical and surgical specialties. How can women benefit from lifecourse research findings?

Please ensure you register in good time to guarantee a place.

For further information, including the latest programme and to register, visit: www.womenshealth.uk.com or contact the Meeting Secretariat, email: IPHW09@confab-consulting.co.uk or +44 (0)208 906 7778.

Credits

Editor: Fleur Adolphe

We welcome articles from members of SLMS. Please send copy to the Communications Manager (email: slms-editor@ucl.ac.uk) by 10 November 2009.