

# Research Matters

Newsletter of the Chief Scientist Office

Issue 2010/2

## Chief Scientist's Message

MUCH HAS CHANGED DURING THE TWO YEARS I HAVE BEEN IN POST, NOT LEAST THE OUTLOOK FOR PUBLICLY-FUNDED HEALTHCARE AND RESEARCH ACROSS THE UK. HOWEVER, AMID FINANCIAL UNCERTAINTY I REMAIN OPTIMISTIC ABOUT NHS RESEARCH & DEVELOPMENT IN SCOTLAND. WE HAVE ENVIABLE RESOURCES – A POPULATION KEEN TO SUPPORT RESEARCH, A HEALTHCARE SYSTEM OFFERING RESEARCH GREAT ADVANTAGES SUCH AS ELECTRONIC RECORDS LINKAGE, AND AN EXTREMELY STRONG RESEARCH BASE IN OUR UNIVERSITIES, AS EVIDENCED BY OUTSTANDING RESULTS IN CLINICAL SUBJECTS IN THE 2008 RESEARCH ASSESSMENT EXERCISE.

New partnerships have increased the flow of research monies into Scotland, with Scottish investigators winning 19% of funds over the last year in key programmes where CSO has partnered the English NIHR, providing Scotland with a welcome increment on the contribution made by CSO (see NPRI article). I expect to see growing success in securing funds for clinical trials, public health and health sciences research from UK sources, bringing additional monies into the Scottish clinical research base.

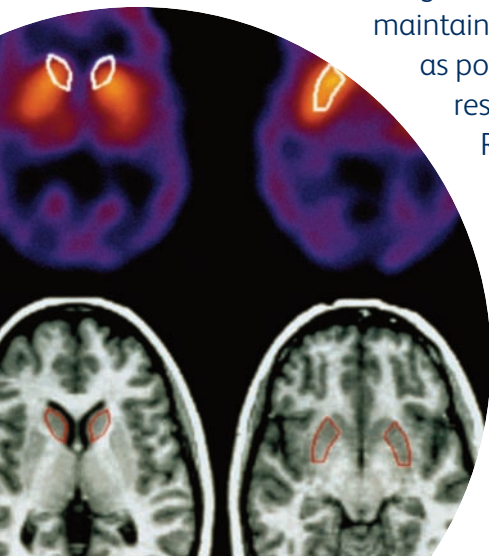
New collaborations emphasising economic impact are strengthening the case for maintaining as much funding as possible for health research. The NHS Research Scotland (NRS) initiative has achieved remarkable improvements in the time taken to set up new clinical studies, with the NRS Permissions Coordinating Centre

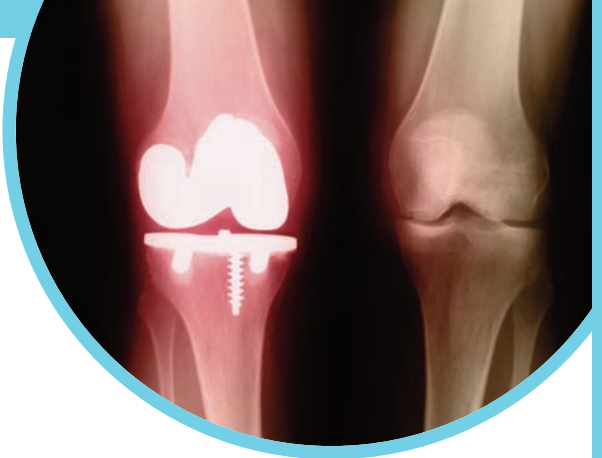
routinely achieving Scotland-wide approvals in not much more than three weeks. In turn, these improvements have fuelled Pharma interest in working with Scotland, particularly through the Scottish Academic Health Sciences Collaboration. In its first year, the four partner Boards (Grampian, Greater Glasgow and Clyde, Lothian and Tayside) have already established over 80 new, full-time research support posts that will increase still further Scotland's competitiveness in commercial and non-commercial clinical research (see SAHSC/NRS articles).

Last, but not least, CSO has a new strategy that emphasises the translation of research for patient and population benefit. However, if we are to develop new interventions for unmet clinical need, our top priority must be to inspire and support early-career researchers. There has never been a more exciting time in our field, because we now have the tools to make a real difference for patients. All we need for success is to remain optimistic.



John Savill





## UPDATE ON THE SCOTTISH ACADEMIC HEALTH SCIENCE COLLABORATION

Since its launch in July 2009, good progress has been made in developing the clinical research infrastructure to support the Scottish Academic Health Sciences Collaboration (SAHSC). By April 2010, over 80 whole time equivalent posts had been recruited by NHS Boards to cover a number of areas including the expansion of clinical research facility resources as well as increased capabilities in imaging, bio repositories and information governance. NHS Boards are committed to meeting further SAHSC recruitment targets that, when combined with existing NHS infrastructure funding, will eventually see the creation of more than 250 whole time equivalent posts across the NHS Boards.

To raise awareness of SAHSC capability, CSO, in conjunction with colleagues from Scottish Development International, has recently been involved in producing a Directory of Scottish Medical Research Expertise. Covering a diverse range of therapeutic areas, this will be used as part of the effort to market the SAHSC and to highlight to industry the opportunities for engaging with Scotland's clinical academic research base. Copies of the Directory and more general information on the SAHSC can be found at:  
<http://www.cso.nhs.uk/SuppScience/sahsc.htm>

## NHS RESEARCH SCOTLAND PERMISSIONS COORDINATING CENTRE

Integral to the SAHSC is the NHS Research Scotland (NRS) initiative involving NHS Scotland R&D offices and CSO. Its early focus has been on developing an efficient system to help researchers obtain permission to undertake multicentre clinical studies in NHSScotland. This has been facilitated through the establishment of the NRS Permissions Coordinating Centre (NRS Permissions CC) in Aberdeen. NRS Permissions CC offers a coordinated and streamlined process for obtaining Scotland-wide NHS R&D permission for multicentre clinical studies. The system is delivering impressive R&D permission times which have been welcomed by industry. Over the first quarter of 2010, the median R&D permission times for commercial and non-commercial studies stood at 16 and 21 working days and over the second quarter 19 and 20 working days respectively. NHS R&D permission time is now less than a quarter of what it was two years ago. Further information on NRS Permissions CC can be found at:  
<http://www.nhsgrampian.org/nrsc>

## STRATEGY UPDATE

CSO has begun the process of implementing Aim 3 of Investing in Research Improving Health by instigating a review of NHS funding and R&D management. We will be working with the NHS R&D Directors to develop new funding mechanisms that reflect ongoing activity, and to ensure the most efficient working processes in R&D management across Scotland. We hope to set up a Blog to keep the research community up-to-date with progress and will put the details on the CSO website when this is up and running.

## CSO SUCCESS STORIES

CSO funded research has been gaining a high profile this year. A study by Dr Malcolm Macleod on bias in reporting of animal studies in stroke leading to an overstatement of efficacy, published in PLoS Biology, was highlighted in New Scientist and the mainstream press including the Telegraph; the funding of a kidney cancer study in Edinburgh was picked up by the Scotsman; a CSO funded study on Talking Mats for patients with intellectual disabilities was the most downloaded paper in 2009 from the British Journal of Learning Disability. In addition the Chief Scientist Sir John Savill was interviewed for Public Servant magazine, and several Scottish sites have been highlighted as high recruiters for commercial studies. All good news in raising Scotland's research profile.

## CLINICAL ACADEMIC FELLOWSHIPS

The 2010 round of applications for Clinical Academic Fellowships concluded in late Spring. Twenty applications were considered, eight were interviewed and three awards were made: Dr Katie Gallacher (Glasgow) will be looking at the burden of treatment in stroke patients, Dr Paul Lochhead (Aberdeen) is investigating the influence of inflammation on DNA in polyps in the colon and Dr David Miller (Aberdeen) hopes to add to knowledge in the area of how early life factors such as maternal diet and smoking influence the development of asthma. These three new Fellows join the current group of 10 whose Fellowships are ongoing.

## NATIONAL PREVENTION RESEARCH INITIATIVE (NPRI)

The MRC NPRI is the national initiative comprising government departments, research councils and major medical charities working together to

encourage and support research into chronic disease prevention. CSO investment in NPRI is in line with the generally accepted 10% principle. The value of this investment and the success of Scottish applications to date has been quantified by NPRI as £4.2 million, equating to 20.5% of the total grant spend. This fact sits comfortably with metrics highlighting that in 2009/10, Scottish researchers won 19% of the funds awarded under the Health Technology Assessment clinical trials programme.

## TRANSLATIONAL FOCUS

CSO's new strategy, in which Translational issues feature strongly, was discussed by the Health Services and Population Health Research Committee at a special meeting in February. Increasingly, the HSP funding stream emphasises the importance of small grants and project grant applications locating themselves within a wider programme of research. Funded work involving feasibility studies, pilots and early stage investigations are then readily translatable into further projects that have strong potential for evolving into direct patient benefit.

The Committee recommended that in CSO guidance a stronger emphasis is placed on the importance of establishing translational benefit in applications, and there is now new guidance on our website. A further area for discussion was around how CSO would track translational outcomes. Currently we are discussing how best to evaluate the outcomes and impact of our research investments.





In relation to the Experimental and Translational Medicine Research Committee (ETMRC) both applicants and referees are now asked to consider the translational aspects of any submitted research projects. CSO is currently working to maximise the potential for the ETMRC to act as a catalyst funder, in particular with respect to the translational funding streams of our partners within the Office for Strategic Co-ordination of Health Research (namely the MRC and the National Institute for Health Research).

## COMMITTEE UPDATE

At their May meeting the HSPHRC considered 11 applications and five were recommended for funding. In addition 12 final reports were considered with three of these (described below) being graded excellent. Summaries of all accepted final reports can be downloaded from the Publications section of the CSO website.

**Professor Peter Davey** and colleagues compared patients infected with drug resistant (MRSA) and sensitive (MSSA) strains of *Staphylococcus aureus*, either on arrival at hospital or during their stay. Mortality, length of stay and hospital readmission were significantly higher in both groups than in a comparable group of uninfected patients. The researchers conclude that the impact of these infections is greater than previously estimated. Although mortality is higher in MRSA cases, efforts are needed to reduce both types of infection (CZH/4/466).

**Professor S Bhattacharya** and colleagues investigated the cost-effectiveness of transferring single or double embryos in IVF. They found that transferring one embryo is more cost-effective in younger women, but that in women over 36 it may be worth incurring the additional cost of a double embryo transfer in order to achieve more live births. However this does then have an impact on quality of life issues if the double transfer results in twins (CZG/2/361).

**Dr N Cruden** and colleagues examined the risks of non-cardiac surgery in patients who had a tube placed in the coronary arteries that supply the heart to keep the arteries open (coronary stent). Their findings suggest that patients should not undergo non-cardiac surgery for at least six weeks following stent implantation and that if they do undergo surgery they should be given anti-clotting drugs during the surgery (CZG/2/375).

At their June meeting the ETMRC considered 20 applications and funding outcomes will be available on the website soon. In addition four final reports were considered.

## CSO STAFF

Dr Alan McNair arrived at CSO in March to take up the position of Research Manager for Experimental and Translational Medicine. His role within CSO is to manage the grant awarding process for one of CSO's two major research funding committees. He also has responsibility for managing CSO's interaction with the Clinical Research Networks for Cancer, Diabetes and Stroke, and for other strategic health research initiatives for which CSO has provided funding, including Generation Scotland and SINAPSE.

Before joining CSO, he managed the participation of the University of Dundee and NHS Tayside in the Translational Medicine Research Collaboration. This gave him insight into the potential benefits to Scotland of translational medicine, and an understanding of Scotland's unique strengths as a place in which to conduct multi-centre translational research. His background is in academic research, in particular the molecular biology of multicellular parasites and the regulation of gene expression.