Pelvic health
Glasgow company offers less invasive surgical devices

Dementia
importance of environmental design

Europe
gateway provides support and advice for businesses

Patient simulators
Teaching aids offer anatomical realism
Exciting times ahead

FIVE YEARS on from its official launch in 2005, Nexxus has not only secured funding to continue its activities for a further 3 year period in the West of Scotland but, in an exciting development, will now also provide activities in the East in a new collaboration with the Edinburgh Science Triangle.

Professor Chris Packard, Chair of the Nexxus Steering Group and R&D Director NHS Greater Glasgow & Clyde, recalls that over the years Nexxus received many requests for assistance from organisations and individuals based in the East who wished to take advantage of the services which Nexxus offered.

‘Our staff could only suggest enquirers attend our events in the West in order to make new contacts and tap into the network there, since at that stage we were funded exclusively to promote and support life science in the West of Scotland,’ he explained. ‘All of the other services we provided such as assisting with writing and distributing news items, promoting individuals and organisations through our various media channels and facilitating direct introductions, unfortunately couldn’t be made available to them. Now however, that’s all set to change due to the collaboration with the Edinburgh Science Triangle and we’re very much looking forward to the new venture.’

Barry Shafe, Project Director of the Edinburgh Science Triangle, agrees. ‘One of the goals of the Edinburgh Science Triangle partnership project, which brings together the universities, councils, science parks and Scottish Enterprise, has been to help build community and more interaction between academic research and business innovation. Networking is key to creating connections and we have been impressed by the structured and targeted approach of Nexxus and it made sense to work together. We are now co-operating to fund and operate a dedicated hub in Edinburgh and the Eastern side of the Central Belt. Together with the established West of Scotland hub, Nexxus will be able to make an even greater contribution towards helping attract new investors to Scotland.’

Laura Gordon of the Glasgow:Edinburgh Collaboration said, ‘The Scottish life sciences industry is considered one of the top 15 in the world and is ranked 7th in Europe. These are impressive figures, however in an increasingly competitive global market I firmly believe that by increasing links between those working across the academic and commercial sector, the potential is there to position Glasgow and Edinburgh collectively on the global stage as a centre of excellence for life sciences.

Few areas can boast such a high concentration of world class businesses and along with the 8 Universities in the Central Belt, this provides a highly compelling proposition to international investors, academics and students.’

The new East venture will be funded by contributions from the European Regional Development Fund, the Scottish Government’s SEEKIT programme, Scottish Enterprise, the Edinburgh Science Triangle and the Glasgow:Edinburgh Collaboration. The official launch of the new Network is anticipated in the final quarter of the year.
Surgical mesh solutions

Headquartered in Glasgow, Mpathy Medical was formed in 2003 and patent and product development continued. Subsequently, the company focused on the clinical validation of its technologies, organising trials in the US and UK and gaining regulatory clearance. The company has received 510(k) clearance to market by the FDA in the US and CE marking in the UK for all its medical devices. Mpathy Medical Inc. was formed in late 2007 and US operations were later established in Raynham, Massachusetts.

Mpathy Medical Smartmesh™ at 30X magnification
A: Uniform 1.8 mm macropores
B: 100 micron interstitial Smartpores™

Mpowering solutions

The US launch of the company’s product lines for USI - Minitape® - and POP - Restorelle™ took place in May 2008 and sales commenced in the markets of urogynaecology, gynaecology, and urology. All of Mpathy Medical’s products are constructed with Smartmesh™ Technology - the physiologically compatible and ultra-lightweight mesh, which encourages collagen growth for optimal health outcomes. Smartmesh™ is made of polypropylene mesh, which is a trusted material that has been implanted in patients for over 50 years. As the lightest mesh available at 19 grams/square meter, Smartmesh™ has a near zero erosion rate and foreign body complications. The mesh’s patented 100 micron interstitial Smartpores™ offer greater tissue strength three months post-operatively, yielding 71% more mature type I collagen growth and reduces inflammation.

‘Our mesh was designed specifically for the female anatomy. It is very light, but is still strong and promotes good growth of tissue. Smartmesh™ is the mesh a woman’s body would choose and it’s easy to use,’ said Ian Stevens, Chief Executive Officer, Mpathy Medical.

The common procedure used to treat USI is to place a mesh sling under the urethra and lift it up to control urinary flow. Minitape® is the original patented minisling for treating USI. The concept of a minising was invented by Mpathy Medical in 2001 and was first used clinically in 2002. Minitape® delivers a unique patented method which ensures stabilisation for the key 72 post-operative hours. This allows for functionality and effectiveness similar to a full length sling. Surgeons are able to ‘fine-tune’ the sling up to 72 hours for maximum repair and can place the mesh under local anaesthesia in the medic’s office if desired.

POP can range from a mild bulge to a more serious protrusion and the surgical approach that is often performed is sutured vaginal repair or implanting mesh. The Restorelle™ product line, which is comprised of Restorelle™ AP, EZA and EZP – offers solutions used for pelvic floor repair. The mesh serves as a scaffold as healthy tissue growth occurs. These procedures are generally performed under general anesthesia. But, unlike procedures that utilise more mesh, dissection is less invasive with Restorelle™ because less material is placed in the body and there is less material to be secured.

Renewed quality of life

Many women often choose to silently suffer from USI and POP and are not aware that there are minimally invasive solutions available. The surgical solutions designed by Mpathy Medical can help surgeons achieve optimal outcomes for their patients as the mesh is non-palpable to the patient and her partner and maintains good vaginal elasticity. Following surgery, patients are able to resume work and normal activity fairly rapidly.

Mpathy Medical is funded by Scotland’s Archangel Informal Investment and Scottish Enterprise’s co-investment fund.

For further information
T: 0141 773 6244
E: enquiries@mpathymedical.com
W: www.mpathymedical.com
A growing research community

THE SCHOOL of Health and Social Care at Glasgow Caledonian University has a growing research community offering clinically relevant, leading edge research in 4 key areas - musculoskeletal involvement of the foot and ankle in inflammatory joint disease, monitoring of physical activity in a free-living environment, gerontology, and neurological disability and rehabilitation. Complementary research areas are emerging in the areas of return to work and patient self referral. The School is currently in receipt of over £1,200,000 of external grant funding and is part of two pooling initiatives: HealthQWest - a West of Scotland consortium for nursing, midwifery and allied health professional’s research; and the Glasgow Research Partnership in Engineering.

The School comprises Divisions of Occupational Therapy, Physiotherapy, Podiatric Medicine and Surgery, Radiography, and Social Work, and is one of the largest providers of health and social care education in the country. Strong links between the academic activity of the School and the practice of allied health professionals and social workers, provides a clear clinical focus to the research. In addition, research in learning and teaching is conducted, with the current key focus on interprofessional education, learning and working.

Musculoskeletal
Research seeks to understand more fully the pathways leading from altered structure and function to impairment and disability, and the development and evaluation of disease-staged targeted primary and rehabilitative interventions. The major clinical theme is inflammatory joint disease (rheumatoid arthritis, juvenile idiopathic arthritis and psoriatic arthritis). The group is conducting valuable audit work investigating the scale of foot involvement in these diseases, and investigating the evidence for clinical effectiveness of pediatric interventions. In addition, the group is involved in the development of clinical outcome measures, such as the translation of the Leeds Foot Impact Scale into several European languages.

Monitoring physical activity research
Exploring the use of free-living activity monitoring as a primary outcome measure for clinical interventions and the use of free-living activity data informs decision making. Research is focused on the use of periods of sitting, standing and walking, as a measure of physical activity grounded in clinical relevance. Alongside the application of these outcome measures to clinical and workplace populations, the group also focus on the development of novel data analysis techniques to assess patterns of activity in this rich data field. The group has strong links to the Nexus Innovation Award winning company PAL Technologies Ltd, providing links between the use and development of activity monitors.

Neurological disability and rehabilitation
Research is focussed towards 2 main themes - the development and evaluation of rehabilitative therapies, and specialist neuroimaging studies - using fMRI - to determine the neural mechanisms underpinning normal and impaired functioning in order to predict patient outcome and to optimise patient management. The scope of neurological and neuropsychological conditions currently being investigated by members of the team includes Multiple Sclerosis, Parkinson’s Disease, chronic fatigue syndrome, acute brain injury, cognitive visual impairment, the ageing brain, developmental coordination disorder and autism.

Gerontology
Research aims to promote health and wellbeing in older adults through an exploration of the physical and psychosocial components of health and social activity. There are two main areas of research a) falls, fall prevention and physical activity for older people and b) exploring the voice of the older service user within health and social care, including people with dementia, older people fitted with a hearing aid, and the educational needs of older adults.

Complementary areas of research within the school focus on service design and evaluation, especially from a service user’s perspective. Patient self referral research is producing an evidence base surrounding this referral pathway, which has been used to inform policy at professional body and government levels, both nationally and internationally. Return to Work research is currently evaluating the Condition Management Programmes run by the NHS and Job Centre Plus in Glasgow, Lanarkshire and Northumberland. The effectiveness, and both practitioner and client perception of the programmes, is being explored. The School is also leading an evaluation of the integration of occupational therapy service provision across health and social care in Glasgow City.

In January this year, the School hosted its first Community of Research Exchange (CORE) conference, designed to showcase the emerging areas of its research. This was attended by 140 participants from the UK and continental Europe. A second CORE conference will be held on 30 January 2009, with satellite sessions on 29 January.

For further information about the School of Health and Social Care’s activities, contact Vincent McKay, Associate Dean of Recruitment and External Relations
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Investments secured

GLASGOW BASED medical device company Ocutec has secured further investment of £775,000 from Dundee-based Discovery Investment Fund (£325,000), the Scottish Enterprise Co-Investment Fund (£325,000) and other private individuals (£125,000). This brings Ocutec’s total funding to £1.5M since January 2007, when Discovery Investment Fund made its initial investment. This includes a ‘SMART:Scotland’ grant totalling £232,000 from the Scottish Government.

Ocutec has invented novel advanced materials and manufacturing technologies. These are based on polyethylene glycol (PEG), a well known polymer widely used in medical devices, food packaging, skin care products and injections. The company is initially focused on delivering disposable contact lenses with twin advantages that will revolutionise the contact lens industry. These are significant manufacturing cost reductions, and a superior and sustainable all day wearing experience.

Mr Wade Tipton, formerly General Manager of Clearlab and Technical Director of VisionTec, has recently been appointed as Managing Director of Ocutec. ‘Our polymers are thermoplastic,’ he said. ‘As such, they can be shaped under heat and pressure using either compression or injection moulding. These manufacturing techniques are commonly used in other industries to produce high quality products in large volumes at low cost. By applying these techniques to our polymers, we believe we can make contact lenses at a fundamentally lower cost than is available today. We have already completed design and manufacture of lens prototypes, and testing by independent experts has indicated that these are high quality lenses exhibiting good biocompatibility properties. Our next objective is to secure the regulatory approvals needed to progress extensive on-eye testing, which is the precursor to a market ready product.’

SLEEPLESS IN GLASGOW

DID YOU sleep well last night? If you didn’t, you’re not the only one. Insomnia is the most common mental health problem in the UK. In Glasgow alone, 11 million sleeping pills were consumed last year. And yet there are only a handful of centres in the world dedicated to frontline research that tries to understand sleep disturbance of this type.

The Glasgow Sleep Centre, based within the Section of Psychological Medicine at the University of Glasgow, is one such centre. Formed by University of Glasgow Professor Colin Espie, the four-bedded research unit monitors people’s sleep patterns objectively using Electroencephalography (EEG). EEG measures electrical activity produced by the brain using electrodes placed on the scalp. The generated signals are sent to the centre’s control room using Bluetooth technology. Research of this type has helped the creation of the Glasgow Model – a five week intervention programme designed to help restore insomniacs to more normal sleep patterns using a psychological approach called cognitive behavioural therapy.

‘A lot of people think that psychological approaches are rather mysterious and difficult because everyone is different,’ explains Professor Espie, ‘but what we’ve done that’s new is to standardise our approach into a set of procedures that can work in a real world setting because you don’t need a highly-trained specialist to run it. In simple terms what it involves is addressing the mental and habit factors that sustain poor sleep and transferring those to strategies that are effective in restoring good sleep.’

Professor Espie and his team recently collaborated with Cancer Research UK and the Beatson Institute to conduct research into helping cancer patients suffering from sleeplessness. Despite the fact that roughly a third of cancer patients report symptoms of insomnia, sleeplessness and fatigue are neglected areas of cancer care. The study looked at 150 patients who had recently completed treatment for breast, colorectal, prostate and gynaecological cancers, and were suffering from insomnia. This randomised trial offered two-thirds of them access to the Glasgow Model cognitive behavioural therapy.

Those patients who took part in the Glasgow Model therapy reported an average improvement of 55 minutes more sleep a night as well as a significant reduction in fatigue – benefits that were sustained six months after treatment. The study is reported in the Journal of Clinical Oncology.

Shortlisted for innovation award

COLIN URQUHART, Dimensional Imaging, is among six leading entrepreneurs working in Scotland who have been shortlisted for the Gannochy Trust Innovation Award of the Royal Society of Edinburgh (RSE) which carries a cash prize of £50,000.

Dimensional Imaging’s DI3D™ system is the first commercial application in the world that uses passive stereo photogrammetry to derive accurate, high resolution 3D surface images from only a stereo pair of images acquired using standard digital stills cameras. Over fifty DI3D™ systems have already been sold worldwide for use in fields as diverse as orthodontics, OMS (oral and maxillofacial surgery), plastic surgery, burns treatment, dermatology, psychology and entertainment. Dimensional Imaging has also recently launched its revolutionary 4D surface image capture system, which uses the DI3D™ technology to recover time sequences of 3D surface images from digital video images captured at up to 500 frames per second.

The award is intended to encourage and reward Scotland’s young innovators for work which benefits Scotland’s wellbeing. The winner will be announced in October.
Dementia-friendly design

THERE ARE an estimated 60,000 people in Scotland with dementia, and as our population ages this number is expected to increase significantly. Many people will know someone who has developed dementia but despite this, public understanding about the condition is relatively poor. The design of an environment can significantly help or hinder a person with dementia, either improving their quality of life or making it much worse. Some of the modifications that help are low-tech and subtle, but there is also an extensive range of technologies that can help create ‘dementia-friendly’ environments.

Although dementia affects different people in different ways, one of its common features is a loss of memory, often combined with the ordinary problems of getting old. Being able to successfully navigate around a living space – whether this is within your own home or somewhere you are being cared for – can make the difference between a stimulating existence and a loss of control leading to gradual decline.

The Dementia Services Development Centre (DSDC) at the University of Stirling carries out research into dementia, but more importantly promotes practical ways of improving the lives of those with the condition. It includes a design and technology suite which showcases techniques and technologies that can support a person to remain independent, active and healthy. In March this year designer Wayne Hemingway opened the refurbished suite, reflecting an increased interest in the role that design can play in improving the quality of everyone’s lives.

The DSDC is housed in the Iris Murdoch Building, which commemorates the novelist of the same name who developed dementia towards the end of her life. Iris Murdoch’s story was immortalised in the 2001 film ‘Iris’, where she was played by Kate Winslet and Judi Dench. The film helped raise awareness of dementia significantly.

The Iris Murdoch Building incorporates many subtle features to make it more easily navigable for a person with dementia. Signs within the building use ‘multiple clues’ to make wayfinding easier, combining words with images to reinforce the meaning. Something as simple as an unambiguous sign showing where the toilet is can make the difference between independence and incontinence for a frail elderly person with dementia, and a coloured seat can make it easier for them to find and recognise it too.

At the more high-tech end of the spectrum is a group of electronic devices that comes under the umbrella of information and communication technologies. Many of them offer particular benefits to people who may otherwise struggle to remain independent, including those with dementia. Examples range from movement sensors which can alert a carer that someone has got out of bed and may need help, to big-buttoned phones where the speed dials feature a photo of the person you want to call.

Other interventions are more routine. Good lighting, for instance, can dramatically reduce the impairment experienced by someone with dementia. This means ensuring that there is enough light, while avoiding confusing reflections on shiny floors or poorly lit areas that might look like a hole or obstacle. Door frames that contrast well with the surrounding wall are important, as is maintaining the consistency of floor coverings across doorways. Moving from plain lino in the kitchen to a patterned hall carpet may be very visually confusing for a person with dementia and less than optimal eyesight.

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Professor June Andrews, Director of the Dementia Services Development Centre said ‘Technology is playing an increasingly important role in enabling people with dementia to be supported at home, and has the potential to delay the need for admission to residential care. Having the design and technology suite on hand at the dementia centre in Stirling means we can demonstrate the potential of new technology to a wide audience, raising awareness of both its benefits – and limitations.’

Anyone wishing to learn more about good dementia-friendly design can visit the Iris Murdoch Centre and explore the design and technology suite using an audio guide. The centre also has an extensive library and can track down articles and resources on any aspect of dementia. Visitors are often pleasantly surprised by the positive impact that good design can have on the lives of people with dementia, and the work of this pioneering centre is now becoming increasingly well recognised.

For more information on the Centre
T: 01786 467740
W: www.dementia.stir.ac.uk
Productive first year

PROFESSOR TIM MITCHELL of the Scottish Infection Research Network (SIRN) Steering Group is pleased to report that the Network has had a productive first year and is confident that the benefits of its initiatives will lead to improved research into the important area of healthcare associated infections (HAI) in Scotland.

Formed in 2007 with funding from the Scottish Government, the Network has quickly established 6 subgroups focused around (i) MRSA (ii) C.difficile (iii) Antibiotic prescribing (iv) Behavioural (v) Infection control nursing and (vi) Streptococcus pneumoniae.

In its first year of operation SIRN organised 2 workshops - ‘Developing Scottish Priorities for MRSA Research’ and ‘Antibiotic use: making the most of what we have’. These workshops were very well received and provided an excellent platform to discuss the way forward in research in these areas. A third workshop is planned for 18 September 2008 entitled ‘Clostridium difficile infection in Scotland: the way forward’.

SIRN will shortly issue a call for research proposals to address the strategic issues identified in the consultation process. It plans to fund one larger research project (up to £160,000) over a 2 year term, as well as 2 intermediate awards of up to £10,000 and 6 smaller awards of up to £5,000. Capacity building and networking will form an important part of these awards and it is anticipated that they will allow the development of research projects within a network to address important issues, and also provide training opportunities, in HAI research.

Further information can be found at www.gla.ac.uk/faculties/fbls/sirn.

On-line degree

A NEW Master of Research (MRes) degree in Medical Technology will be offered by the Bioengineering Unit at the University of Strathclyde from October 2008. The course will be delivered on-line, using teaching material designed specifically for this route.

The aim of this course is to offer a common research focused degree in Medical Technology to the clinical/life sciences, and medical industrial sectors. In particular the novelty of an on-line degree in this field permits those who are already engaged in a career in these fields to undertake formal research training without having to take time out from developing work commitments. It has been designed to help answer the academic needs of various professionals including clinical doctors, nurses, paramedical professionals, and those engaged in the industrial medical device sector.

The course consists of two main elements, a credit based taught component consisting of case study, medical science and research methodology and other medical technology focused modules; and a research project. The research project will be undertaken in the workplace and supervised by a local supervisor supported by a senior member of the Bioengineering Unit academic staff. Students will have continued access to academic support from Bioengineering Unit staff throughout the course. At present examinations will take place at the University of Strathclyde, but alternative examination arrangements are being assessed for future years.

The degree course has been structured to be undertaken over one year, however, students may wish to complete the course over a longer period depending on prevailing circumstances. Some studentships may be available for the first year of delivery on a competitive basis.

For further information on the course and registration procedures etc visit the Bioengineering Unit website (www.strath.ac.uk/bioeng), or contact Professor Terry Gourlay, Course Director T: 0141 548 2005 E: terence.gourlay@strath.ac.uk

Merger announced

IN JUNE 2008 Invitrogen announced that they will combine with Applied Biosystems (ABI) to create a global leader in biotechnology reagents and systems.

The combined company will have significant R&D investments, along with a strong culture of innovation at both companies. In addition, Invitrogen and ABI have highly recognisable brands in core structural and functional genomic product areas, as well as foundational tools such as transfection reagents, antibodies, fluorescent technologies, and cell culture reagents. The company advise that these products, along with ABI’s systems integration capabilities, are intended to serve as the basis for developing new high-performance workflow solutions for customers.

Invitrogen and ABI will also be well positioned to provide value added products and services in several rapidly growing markets, such as next generation sequencing, applied markets, emerging markets and cell biology. They plan to achieve this position through a combination of Invitrogen’s significant consumables content and chemistry core competencies, together with ABI’s system expertise.

While Invitrogen Corporation is based in Carlsbad, California, its European Headquarters are in Inchinnan, Renfrewshire.

nexxusscotland.com
TRADITIONALLY, NURSES were taught using an apprenticeship model, working with real patients to learn essential clinical skills, but the reduction of in-patient admissions and the growing ethical dilemma of practicing on patients who are unwell, makes such practice increasingly difficult to achieve. However, advances in micro-technology have enabled the development of advanced human patient simulators (AHPS), which use accurate anatomical modelling and sophisticated computer software to replicate human anatomy and physiology. By placing these patient simulators in realistic artificial healthcare environments, a close approximation to clinical practice can be achieved. This is clinical simulation.

Background

The University of the West of Scotland (UWS), formed in November 2007 by the merger of the University of Paisley and Bell College, has reputedly the largest School of Health, Nursing and Midwifery in Scotland, with four campuses covering Lanarkshire, Argyll and Clyde, Ayrshire and Dumfries and Galloway. The most innovative part of the teaching resources of the School of Health, Nursing and Midwifery on Hamilton and Dumfries Campuses, are the artificial healthcare environments and the associated clinical simulation technology. This approach to the pre-registration programmes was driven by the need to design a curriculum that is responsive to the requirements of healthcare providers and the communities served. Learning and teaching methods and clinical simulation expertise has progressed significantly since the original implementation of clinical simulation methods in 2002 and this approach is the most highly evaluated experience of the programmes by students and is entirely supported by NHS partners and key stakeholders in respect of fitness for practice. Clinical Simulation methodology is supported empirically by more than 1,200 published works and by numerous international and national authorities including professional regulatory bodies. Clinical simulation is now embedded throughout all of the pre-registration programmes and the School is frequently asked to give consultancy to other educational providers who wish to adopt these techniques. As a result of the clinical simulation facilities at Hamilton and Dumfries Campuses, the School has gained both a national and international profile. In September 2007 the School organised the Scottish Clinical Skills Network (SCSN) Annual Conference where the Minister for Health launched NHS Education for Scotland’s new Scottish Clinical Skills Strategy. Scotland is in the unique position of being the only country in the world with a national strategy for clinical skills. Professionally, the Nursing and Midwifery Council (NMC), the regulatory body for Nursing and Midwifery, published guidance in 2007 on the integration of clinical simulation methodology into the pre-registration nursing curriculum and the use of these techniques as an adjunct to practice learning, by allowing the use of up to 300 hours over three years for practice within simulated environments.

Clinical simulation

Clinical simulation can be delivered on a continuum of educational activities. Low-fidelity, part-task simulators such as basic life support manikins or injection pads, consist of body-part models, giving little or no feedback to the student, yet allowing repeated practice of primarily psychomotor skills. Medium and high-fidelity patient simulators tend to be computer-driven, whole body manikins, which offer a high degree of anatomical realism, and the ability for the operator to control vital signs such as respirations, blood pressure, pulse, oxygen saturation, ECG etc. Sensors within the manikin also detect interventions, including drug administration and can alter the manikin physiology accordingly. These higher fidelity patient simulators also allow students to practice high level clinical skills such as decision-making, critical thinking and teamwork. UWS...
now has four of these medium-fidelity SimMan™ patient simulators and two medium-fidelity ‘Noelle’ maternal and neonatal birthing simulators, as well as a comprehensive range of lower fidelity simulators and part-task trainers.

The advantages of clinical simulation lie in creating a safe, student-centred learning environment, where students can hone their clinical skills prior to clinical placement. Clinical scenarios can be repeated as many times as necessary, emergency ‘fire drills’ such as cardiac arrest management can be practiced and rare scenarios, perhaps difficult to find in clinical practice, can be recreated. All of these simulated encounters can be debriefed following the scenario, giving students immediate and accurate feedback on their performance. The ability to deliver an immediate debrief to students is widely recognised as one of the key facets of clinical simulation that leads to effective learning.

Hamilton Campus offers a range of clinical environments - a three-bedded Acute Ward, Resuscitation Room, Midwifery Skills Suite, Core Skills Ward, Part-task Skills Laboratory, Primary-care Skills Room, Communication Room and dedicated Microsim™ Computer Lab. These facilities are replicated on the Dumfries Campus, albeit on a lesser scale to reflect the smaller numbers of students on that site. All simulated environments are monitored using the Scotia Medical Observation and Training System (SMOTS), a highly advanced audiovisual system, whereby cameras can be controlled remotely, clinical scenarios can be recorded live and the operator can have two-way communication with students participating in simulated practice. SMOTS currently extends from Hamilton to Dumfries campus facilitating live links and cross-campus teaching between the two sites.

**Learning and teaching using clinical simulation**

Delivery of simulated practice at UWS is based on a spiral curriculum model, meaning that concepts are re-visited, at increasingly complex levels as students transit the spiral over the three years of the pre-registration nursing programme. Additionally, the programme always follows the logical learning sequence of -

Theory → Skills → Simulated practice → Clinical placement

For example, students undergoing their surgical nursing module would have a 5 week theory block, where surgical nursing theory is delivered, followed by clinical skills necessary to nurse surgical patients such as removal of stitches and staples or how to run through IV fluids, followed by simulated patient scenarios such as assessing and managing a patient with pain control issues or a patient in hypovolaemic shock following a haemorrhage. These students then undertake a 5 week placement on surgical wards.

In addition to hands-on simulation, students are given access to Microsim™ a computer-based, interactive patient simulation programme. Using this sophisticated software enables students to explore 35 different patient scenarios in real time, be scored on their performance and have instantaneous, expert feedback on how they managed the patient. This mode of simulation is highly evaluated by students who especially value the fact that they can proceed at their own pace and at times which suit their personal workload.

Clinical simulation also lends itself to delivering stand-alone courses and the Resuscitation Council (UK) Immediate Life Support (ILS) provider course has been delivered to all of the final year students over the past 5 years. This year celebrates the 1000th student to attain this additional, national qualification. Strong links with NHS partners means that UWS clinical simulation facilities can be opened up and shared with other disciplines and since 2006 the newly qualified doctors working in NHS Lanarkshire have used the simulation suite during their induction programme.

**Current and future developments**

The University is already investing in clinical simulation technology for the Paisley and Ayr Campuses, in fact, development of a Midwifery Simulation Laboratory and Communication Suite started on the Paisley campus in July and a brand new campus, currently under construction on the Ayr site will incorporate a dedicated clinical simulation suite. All sites will be fitted with SMOTS audiovisual technology, facilitating cross-campus teaching over the 4 sites in the near future.

On the international front, international development funding from the Scottish Government over the past 3 years has enabled provision of training in clinical simulation methodology to lecturers from Kamuzu College of Nursing and the College of Health Sciences in Malawi, Africa. Four clinical skills laboratories at key sites in Malawi have subsequently been equipped and developed for use in training their healthcare professionals.

*For further information contact Alison McLachlan, Senior Lecturer or Jack Simpson, Clinical Simulation Lead Lecturer E: alison.mclachlan@uws.ac.uk E: jack.simpson@uws.ac.uk T: 01698 283100*
My job

My role is interesting and varied and includes extensive interaction externally with clients and internally with Project Management, Sales and Marketing, Quality Assurance and other departments within the company to research, develop and promote new assays and technologies.

I manage a team of scientists, lab specialists and technologists which involves planning and organising laboratory work, training staff, analysing data and writing reports. I am also involved in formulating quotes, sourcing reagents and materials, writing protocols, technical specifications, risk assessments and GMO assessments.

Q: Tell us about a typical day (or is there no such thing?)

A typical day will involve responding to emails and enquiries from clients and colleagues, both in the UK and our facility in Rockville combined with meetings and conference calls with a range of different people.

During the development of a new study I spend a lot of time researching literature, liaising with clients, brainstorming with colleagues, formulating experimental plans and writing protocols.

When a study is ongoing there will be continuous monitoring of laboratory work, daily briefings with staff, data review, analysis and frequent updates to clients and Project Management.

Q: So what’s taken up most of your time recently?

The team have recently completed a significant development project that has been ongoing for several years. The work has been in collaboration with Professor Ruth Jarrett’s laboratory in the Faculty of Veterinary Medicine, University of Glasgow and completion of the project means that we are able to offer our clients exclusive testing for a range of human viruses to ensure their products are safe for human use.

Q: What’s on the cards for the next few months?

BioReliance provides cost-effective biological testing services to more than 600 companies annually, including most of the largest pharmaceutical and biopharmaceutical firms in the world and we are always developing our capabilities to ensure we continue to offer the best service possible to clients.

The Virology Scientific Support team and the Molecular Biology team at BioReliance are currently involved in evaluating a range of technologies that exploit cutting edge science for the detection of viral agents. Preliminary results have been very encouraging and over the next few months we hope to be in a position where we can start introducing these new technologies into our routine testing facilities.

Q: What would you want to do if you weren’t doing this job?

I am very satisfied with the way my career has progressed and would not change this if I had the choice!

Prior to joining BioReliance I spent seven enjoyable years as a research scientist working on various infectious diseases and vaccine development. This provided me with excellent opportunities to work both in the UK and abroad and allowed me to develop a wide range of transferable skills that have been invaluable when I moved from research into my current role.

For me, making the transition into a contract research organisation from academia has been an excellent career choice. My job with BioReliance is challenging, stimulating, fast paced and varied and I enjoy being part of a company that is involved in delivering a crucial service through cutting edge developments in vaccine/therapeutic technology.

I am also very passionate about fitness so have often wondered how feasible it would be to combine a career in science with being a bodycombat instructor/personal trainer/coach/sports masseuse/physiotherapist............

However - at least for the foreseeable future - I will continue to focus on ensuring continued client satisfaction with our services and fighting the battle against detecting viruses, rather than the battle against sedentary lifestyles!

For more information contact Clare
T: 0141 579 3245
E: clare.blue@bioreliance.com

Or for information about BioReliance and career opportunities within the organisation
T: 0141 946 9999
W: www.bioreliance.com
Removing barriers to innovation

THE UNIVERSITY of Glasgow has received funding from ERDF, Scottish Enterprise and the Scottish Government’s SEEKIT Programme for their new Innovation Network.

The Network is a €2.7M initiative, designed to increase engagement by Scottish companies in innovation, product development and new supply chains by collaborating with the University.

One of the principal objectives of the Innovation Network is to increase the participation of academic staff and postgraduate researchers in the knowledge transfer agenda and build on the University’s interaction with industry.

The Network is aimed at growing, innovative businesses that are looking to increase their competitiveness in a global marketplace.

Micro and Small Enterprises seeking innovation assistance from universities are often unable to bear the full cost of a contract research project and current knowledge transfer support schemes, such as KTP, may also be beyond their budgets.

The Innovation Network will work to help remove the barriers to innovation for Micro and Small Enterprises through the increased use of low-cost knowledge transfer mechanisms such as short-term student projects, academic consultancy and feasibility studies.

Importantly the Network can provide financial support of up to £5,000 for feasibility studies between the University and SMEs to stimulate academic and industrial engagement. Applications for the funding can be made by either the company or the academic.

Strong encouragement will be given to projects that assess both the potential and feasibility of a new product or process and can lead to opportunities to attract follow-on funding from existing sources, demonstrate a clear route to market or indicate a step change in current processes within a Micro or Small Enterprise.

These studies are very much focused on helping to create long-term collaborations between companies and the University of Glasgow. The Feasibility Studies initiative has been modelled on the successful TTOM Award Scheme (www.ttom.org.uk) but with a wider technology focus.

For further information contact Louise O’Neill
T: 0141 330 2730
E: l.oneill@enterprise.gla.ac.uk
W: www.glasgow.ac.uk/businessandindustry

At the first stroke ..... 

THE SCOTTISH Stroke Research Network (SSRN) hosted its first Acute Stroke Day in June at the Royal College of Physicians in Glasgow with over 138 delegates attending.

After an introduction from Professor of Stroke Care and SSRN Clinical Lead, Professor Peter Langhorne, Dr Jesse Dawson gave an overview of Acute Medical Management. Other topics covered included an outline of the Adults with Incapacity Act by Professor of Cerebrovascular Medicine at the University of Glasgow, Kennedy Lees.

Delegates also had the opportunity to learn about the potential which state-of-the-art video telecommunication offers in a presentation by Anne Duthie, Service Development Manager, Scottish Centre for Telehealth. Anne explained how to set up an effective project team and the benefits which telemedicine may have for reducing the time from emergency room arrival to evaluation and treatment of stroke patients, adding that it also has the potential to enhance patient entry into clinical trials.

Other highlights of the day were examples of hyperacute stroke services in Scotland given by Dr MJ MacLeod, Dr Stuart Johnstone and Dr Mark Barber, and a showcase of existing and planned research in Scotland.

Meantime a nurses training afternoon held the previous day was attended by around 20 nurses. Speakers included Fiona Waddell who is the Director responsible for clinical trials services at Tower Mains.

Among the topics covered by her were Consent, Explaining Risks and Benefits to patients and relatives and an Overview of the Mental Capacity Act, Adults with Incapacity. A talk was also given by Sara Joice on Developing a Research Career in Nursing.

One of the SSRN’s aims is to identify training and education needs of the stroke research workforce and Professor Langhome felt that both of these events were extremely helpful in this regard. ‘We’ve had very positive feedback from those who attended,’ he said. ‘Overall the events were felt to be very worthwhile and everyone went away better informed and full of enthusiasm.’
Setting up a clinical trial

**CLINICAL RESEARCH** has become much more difficult. In the not too distant past you only needed to have the idea, find the funding, obtain approval from your local research ethics committee, do the study and write a report. Easy – job done!

Now however we must all act in accordance with the EC directive. This has added many more regulations, some of which are both complex and, to be frank, difficult to understand.

In the name of patient or participant safety every aspect of a trial has to meet with the relevant regulations - and be carefully documented to confirm that this is so. In addition, the EC directive has taken International Conference on Harmonisation/WHO Good Clinical Practice (ICH-GCP) from an advisory set of standards to a legal set of rules which an investigator must obey.

There are a series of websites* to guide a potential investigator through the maze of regulations to start up a study. Between them you will find all, or nearly all, of the information you need to obtain your approvals. Unfortunately these websites, though helpful, are both large and labyrinthine - finding clear answers to simple questions is not often easy and is always time consuming.

To make matters even more difficult the pharmaceutical industry has embraced the concept of Investigator Initiated Trials (IITs). In this type of trial the investigator is cut off from the support that he or she might previously have received from the company and has to take on all the duties and obligations of a sponsor. Many very competent investigators simply do not have the knowledge or resources to comply with these responsibilities. Often this means that it is just not possible to complete a study.

The various regulatory aspects of a study are shown in Figure 1 but do not even cover finding your study participants and performing the study procedures! Of course not all of them will apply to your study, but in an increasingly litigious society it is important to ensure that all bases are covered.

The regulatory agencies are working hard to simplify the entire process of multiple approvals (MREC, SSA, R&D) - and we can only wish them luck! However the importance of participant safety, transparency and clear documentation will continue to be the guiding principles of clinical research. However streamlined, the simplicity of the 'good old days' will not return and clinical trials will continue to operate in a very regulated environment.

Everyone has their strengths - statistics for one, organisation and form filling for another, patient recruitment for someone else. Any clinical trial is only as good as its weakest component and everyone has weaknesses. Addressing these can make for a stronger, more robust project and even where strengths exist, it is obviously easier if it has been done before.

Recognising the problems outlined above, West of Scotland Science Park based clinical research company CPS Research has set up a sub-division TrialAssist. The concept is NOT to take over any project but to be in the background to give support to the investigator, to encourage their strengths and supplement their weaknesses, helping a potential investigator with any aspect of trial set up and management.


CPS Research has worked for 25 years with academic units and pharmaceutical companies, providing services from trial design and protocol writing through approval applications, patient recruitment and retention, to statistics and report writing and has recent intensive experience of IITs. For further information on CPS Research and TrialAssist contact Gordon Crawford

T: 0141 946 7888
E: gordon@cpsresearch.co.uk
W: www.cpsresearch.co.uk

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**Figure 1 - clinical trial management checklist**

<table>
<thead>
<tr>
<th><strong>You WILL need</strong></th>
<th><strong>You MAY need</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design:</strong></td>
<td></td>
</tr>
<tr>
<td>A CRF</td>
<td>Patient information leaflets</td>
</tr>
<tr>
<td>A protocol that will meet the relevant standards</td>
<td>Advertising materials</td>
</tr>
<tr>
<td>A suitable PIS and consent form</td>
<td></td>
</tr>
<tr>
<td><strong>Regulatory:</strong></td>
<td></td>
</tr>
<tr>
<td>Main REC approval</td>
<td>Local SSA approval</td>
</tr>
<tr>
<td>Local R&amp;D management</td>
<td>A CTA from MHRA</td>
</tr>
<tr>
<td>To comply with pharmacovigilance reporting</td>
<td>Independent scientific assessment</td>
</tr>
<tr>
<td>To comply with GCP</td>
<td></td>
</tr>
<tr>
<td>To meet all manufacturing packaging labels/rules for your test product</td>
<td></td>
</tr>
<tr>
<td>Approvals for any protocol changes</td>
<td></td>
</tr>
<tr>
<td>To achieve essential documents</td>
<td></td>
</tr>
<tr>
<td><strong>Trial Management:</strong></td>
<td></td>
</tr>
<tr>
<td>Investigator site files</td>
<td>Trial insurance cover</td>
</tr>
<tr>
<td>QA/QC procedures</td>
<td>To source your investigational product</td>
</tr>
<tr>
<td>Delegation logs (unless you are going to do all the work yourself)</td>
<td>A blinded randomisation service</td>
</tr>
<tr>
<td>Contracts for any sub-contracted tasks</td>
<td>Laboratories/courier services for samples</td>
</tr>
<tr>
<td>A safety reporting system that meets with current pharmacovigilance</td>
<td>Study monitoring</td>
</tr>
<tr>
<td>To store your test product appropriately and show that this has been done</td>
<td>An Investigational Medicinal Product Dossier (IMPD)</td>
</tr>
<tr>
<td>To meet relevant archiving requirements</td>
<td>An Investigator Brochure (IB)</td>
</tr>
<tr>
<td>A Trial Master File (TMF)</td>
<td>SOPs</td>
</tr>
<tr>
<td><strong>Reporting:</strong></td>
<td></td>
</tr>
<tr>
<td>Some form of study report</td>
<td>Assistance with data handling, statistical analysis, writing a report</td>
</tr>
</tbody>
</table>

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nexxusscotland.com
Go faster oligos

INTEGRATED DNA TECHNOLOGIES (IDT) - the leading supplier of custom nucleic acids in the US - has recently established 2 key European locations which include setting up a corporate office for Bonnie Barney, its Senior VP for Sales and Marketing, in Glasgow. ‘The UK, and especially Scotland, has a high density of academic, pharma/biotech and government research facilities, making it essential to establish a key global base here,’ she commented. ‘Looking at the various possible sites for our UK base, we weighed up many factors and Glasgow became a clear front-runner early on. In reaching our decision, we considered not only business related issues such as cost, infrastructure, ease of access, availability and suitability of staff, but also the ‘liveability’ of the area.’

The establishment of a state-of-the-art production facility in Leuven, Belgium meantime, will maximise existing expertise and provide a centralised location for more efficient delivery. The ability to have oligos delivered overnight to Scotland as a result, has already proven to be very popular. The 2,000 sq metre manufacturing facility has the capacity to synthesise up to 4,000 oligos per day, allowing IDT to provide more products and services to the European life science market with shipments arriving faster than ever before.

Bonnie confirms that being based in Glasgow is certainly helping to increase the amount of scientific collaborations between Scottish scientists and IDT’s Belgian and American based facilities. Over the next 12 months, IDT intend to further expand globally.

Gateway to Europe

ENTERPRISE EUROPE SCOTLAND is a gateway to European business cooperation and technology partnering opportunities, allowing access to all the information and advice needed to find the right business and technology licensing partners.

It offers support and advice to businesses across Scotland to make EU business cooperation and technology partnering opportunities more accessible. Services on offer are specifically designed for high and low tech small and medium enterprises (SMEs), entrepreneurs, start-up companies, research institutes and universities.

Scottish Enterprise, Highlands & Islands Enterprise and Highland Opportunity Ltd are partners in Enterprise Europe Scotland, part of the European Commission’s new Enterprise Europe Network (www.enterprise-europe-network.ec.europa.eu). The Network comprises of expertise made up of nearly 600 organisations in more than 40 countries, all promoting competitiveness and innovation support to their local companies. The Enterprise Europe Network is the largest network of contact points providing information and advice to companies on EU matters.

Caroline Gray-Stephens, Head of Enterprise Europe Scotland said, ‘The creation of a new single network, providing integrated services in support of both business and innovation in Europe, will build on the previous strengths and achievements of both the former Euro Info Centre and Innovation Relay Centre networks. The Enterprise Europe Scotland team brings together the local expertise, experience and knowledge built up over many years in both IRC Scotland and the Euro Info Centre.’

The organisation’s services are wide ranging and include help in finding suitable business partners, assistance with IP licensing and technology transfer, information on funding opportunities including European Framework Programme funding for R&D, the latest tender opportunities, market opportunities and links to European wide innovation networks. It can provide advice on aspects of EU law and how this impacts on business. Indeed, if EU legislation impacts on any business, Enterprise Europe Scotland can feed back directly to the European Commission.

For further information on how Enterprise Europe Scotland can help your business, contact Lorna Maclean, Enterprise Europe Scotland Co-ordinator T: 0141 228 2149 E: lorna.maclean@scotent.co.uk
New appointee has industry needs at heart

THE INSTITUTE of Photonics at the University of Strathclyde has recently employed a new Research Technologist, Gareth Valentine, in an effort to respond more quickly to the needs of industry.

Whilst University staff are often committed to long term research projects, the Institute recognised the need to be able to work more flexibly with industry and in particular with SMEs. It is SMEs’ frequent desire to be able to start more quickly and work with short term contracts that led to this new initiative which is one of several initiatives instigated by the Institute to address the misperception that universities are slow to react.

Business Development Manager Simon Andrews commented ‘With the blossoming biotech sector in Scotland, we are receiving more and more requests for help from a variety of life science companies. As many of these companies are young SMEs they do not usually have in-house expertise in optical systems, even though they are heavily reliant on optical sensing, measuring and imaging.’

This new post enables a researcher with expertise in optics, electronics and software to bring his research experience from academia and industry to bear on challenges from industry. The Research Technologist will be supported by the Institute’s in-house electronics and mechanical workshops and will draw on the knowledge of the 60 staff and students in the Institute.

Chief Executive Tim Holt added, ‘We are grateful to the University for its support in this endeavour. We are hopeful that other departments will adopt this model once it has proven its worth to industry and the University.’

The Mercatt advantage

IP EXCHANGE and alliance building are necessary, but difficult parts, of growing a technology business. Solving problems, overcoming barriers and driving the business forward takes time, energy and often relies heavily on the networks that the senior management team have personally built up over their careers.

What is needed is an easy, cost-effective solution that complements the internal skill-set and makes the process of licensing and external relationship management more successful.

Mercatt.com, the recently launched website dedicated to the IP marketplace addresses just these problems and has extra advantages. It comes from the former IRC team at Targeting Innovation who have been assisting companies from across Scotland to grow and expand their IP portfolio on a trans-national basis.

Not only does Mercatt provide a globally accessible platform for promotion of technology profiles, it includes an active marketing and sales effort ensuring that exposure is increasing daily, to a growing and active community of users who are intent upon locating technology.

The team have been busy over the spring and early summer ensuring that Mercatt has been introduced to the Life Sciences, Oil & Gas, Renewable Energy and Food & Drink markets through attendance and exhibiting at Global and European level conferences. The result is that the early adopters of Mercatt.com come from 30 countries and range from start-ups to blue chip corporations.

Another issue facing business growth is simply finding where to look for information. Mercatt has solved this by creating relationships with other technology profile sources. It brings all that information together under a search engine that requires only your specific choice of search terms – no filtering by industry or keywords, so there is no risk that you have excluded the vital profile matching your technology needs.

The philosophy is to bring information from all industries from all over the world together in a practical searchable manner and to let users examine that information. This enables true innovation and ideas to develop – borrowing common practices including fresh inventions from diverse sources, and using them to impact your own business.

Mercatt is a single point of access on a global basis for all professionals involved in business development and strategic alliance or licensing activities. Currently there are over 14,000 profiles from its own database and a growing plethora of associated sites. No longer do you have to spend time finding suitable collections and instructing the same search in several locations – Mercatt does all that for you, and can also automate the search delivering the results straight to you via email.

For further information visit www.mercatt.com.

nexxusscotland.com
Eye technology unveiled

Innovations Ltd (SHIL) at a conference of world experts in America.

SHIL recently unveiled the pioneering early detection technology, the equivalent of a cardiogram for the eye, at the Association for Research in Vision and Ophthalmology (ARVO) general meeting in Fort Lauderdale, Florida.

The sophisticated software was developed by Glasgow based Clinical Scientist Dr Stuart Parks and Medical Physicist Dr David Keating. The software assists diagnosis and monitoring of retinal problems at a very early stage, including glaucoma and vein occlusions or blockages.

These procedures can all be undertaken by plugging a machine little bigger than a Blackberry into a PC, and connecting a similar system to the patient. A simplified version may soon be available at high street opticians.

The scientists have spent 14 years refining their system, known as the Multifocal Imager 3GEN. The key is the groundbreaking computer software which interprets electronic signals sent from different areas of the retina.

At the forefront of Scottish medical research

MEDICAL RESEARCH SCOTLAND was honoured recently by the patronage of HRH, The Princess Royal. After over 50 years as Scotland’s largest and most comprehensive medical research charity, this honour recognises the work of the charity in supporting cutting-edge medical research. Completely unrestricted in scope, its aim is to support research through the award of grants to young people at the start of their careers in medicine and the biomedical sciences.

In supporting those at the start of their careers, Medical Research Scotland provides the essential initial funding for projects that produce results suitable for subsequent major funding. By helping to establish research careers, the continued strength of the research base and thus the country’s global position at the forefront of leading-edge biomedical science, are underpinned.

Funding is in the form of Research Project Grants to a maximum of £150,000 over three years. Awards are made twice a year (March and September) following a two-stage, online application and review process. Outline applications are reviewed by national and international experts and then a peer review committee of the Trust itself, which decides who to invite to submit Full applications. These also receive comprehensive peer review. Final funding decisions are made following detailed discussion at a meeting of all the Members of Medical Research Scotland.

Research is funded at most of the Scottish HEIs and grant recipients investigate a wide variety of very different topics. For example in the West of Scotland currently these include - brain signalling pathways, the immune response to caries-causing bacteria, dorsal stream dysfunction in children, therapeutic targets for HPV infection, the impact of calcium levels on heart function, wound healing in chronic conditions, a novel tracer for MRI in the brain and perceived interpersonal threat in personality disorders.

Established in 1953 as the Scottish Hospital Endowsments Research Trust (SHERT), the charity was a non-departmental public body (NDPB) until becoming fully independent and adopting the operational name of ‘Medical Research Scotland’ in April 2006. It has never received public funds and its work is supported entirely by income from its invested funds, which currently stand at around £30M. These funds started at £2.3M in 1954 as the endowments from the Scottish hospitals and have grown by prudent investment and the generous support of benefactors. Grants up to an annual spend of £1M are made each year and only very high quality research is supported (~25% of applications).

Chairman for the past 7 years, Professor S. Moira Brown OBE, FRSE, has seen through the transition from NDPB to fully independent charity and has been instrumental in positioning Medical Research Scotland to continue to fulfil a vital role in the 21st century. Commenting on the recognition by HRH, the Princess Royal she said ‘It’s wonderful to receive this accolade. There’s no doubt that without Medical Research Scotland awards, much very valuable research may never have been undertaken. Scotland has a fine history of medical research and we’re proud to continue to be part of its future.’

Further information on Medical Research Scotland and how to apply for an award is available at www.medicalresearchscotland.org.uk. The next closing date for Outline applications is 21 November 2008.
New £36M facility

THE UNIVERSITY of Strathclyde has created a pioneering, world-class centre for research in drug discovery and development - the Strathclyde Institute of Pharmacy and Biomedical Sciences. The Institute brings together, for the first time, leading researchers in the chemical, biological and pharmaceutical sciences to work together more creatively to help combat important health issues of the 21st century. It will conceive and develop new treatments for a range of illnesses, from cardiovascular and inflammatory conditions to cancer and infectious diseases.

To help the Institute achieve its ambitions, a new £36M facility is in the process of being developed that will offer more modern, flexible and high quality accommodation. Strathclyde’s vision is to accommodate research groups together, improve facilities and stimulate creative cross disciplinary collaborations in order to meet the rapidly changing needs of drug discovery and development in the decades ahead. Construction of the new facility will get underway during 2008 and it’s anticipated that the building will be opened in 2011.

The University itself will inject £28M into the capital build and lead gifts have already been secured from charitable trusts and foundations, with the balance to be raised through a fundraising campaign.

Professor Lord Robert Winston, one of the world’s foremost medical academics and presenter of BBC series such as the Human Body, has been named as the patron of the fundraising campaign which was officially launched at a dinner event on 10th September 2008.

For more information about the campaign and how you can contribute contact Nuala Boyle, Development Manager
T: 0141 548 5917
E: nuala.boyle@strath.ac.uk

Service expansion

STUDYING HOW proteins come together in diseases like cancer, asthma, and diabetes, has just become easier. New methods developed in Scotland can precisely measure protein-partner interactions and are shortening the time for delivery of innovative medicines.

Besides having all the conventional screening, profiling and downstream signaling technologies, Scottish Biomedical has expanded its services to include novel assay technologies, which allow for precise identification and quantification of protein-partner interactions (down stream signaling).

The novel protein-partner array technology they have developed precisely identifies the interacting regions of protein-protein interactions (down stream signaling), and provides a peptide sequence that can be used in subsequent HTS to discover highly selective small molecule inhibitors of the target protein-protein interaction. The rapid turnaround from characterization of interactions, to development of candidate drugs that inhibit them and may be used in further trials, is infinitely quicker than conventional methods. The organisation also has leading technology for stable isotope amino acid labeling which allows for identification and quantification of protein-protein interactions. This method is superior to other standard methods because it eliminates non-specific interactions, therefore saving time and money. The technology has recently been applied to GPCRs but can also be used with other targets and accessory proteins (eg kinases, regulatory proteins, and scaffolds etc).

Part of this work was funded by the Scottish Executive SMART program.