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## International Agents' Newsletter

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INTO<sup>®</sup> QUEEN'S UNIVERSITY BELFAST

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## Queen's Vice-Chancellor 'honoured and humbled' by knighthood

Queen's University Vice-Chancellor Professor Peter Gregson has said he is both 'honoured and humbled' to be awarded a knighthood in this year's Queen's Birthday Honours List. Professor Gregson said the honour recognises Queen's pivotal role as an international centre of academic excellence rooted at the heart of Northern Ireland:

"It is enormously humbling to receive this honour. Throughout my career I've been inspired by successive generations of students and by my peers around the world. Any contribution I have made has been through the magnificent teams of people with whom I have been privileged to work, and with the support of my wife and family.

"Nowhere has this been more true than at Queen's, where I've been fortunate to work with so many dedicated colleagues and friends within the University and across Northern Ireland. The success of Queen's is built on the extraordinary achievement of men and women from all areas of the

University. Our greatest strength is our people: our graduates, our students and, above all, our staff. Their service and commitment are remarkable, and it is an honour for me to lead this exceptional university."

Among the first to congratulate Professor Gregson was the Chair of the University Senate, Pro-Chancellor Sir David Fell. "Professor Gregson's leadership of the University has been outstanding. He led Queen's into the Russell Group of the UK's 20 leading research-intensive universities in 2006 and to the status of the Times Higher Education Entrepreneurial University of the Year in 2009. He has also led the development of formal strategic international partnerships between Queen's and leading universities around the world, notably in the United States, India, Malaysia and China.

"When he was first appointed, Professor Gregson summed up his vision for Queen's in three simple words – leading, inspiring and

delivering. He has led by example and served with distinction on all three fronts, and this honour is well-deserved."

Professor Gregson has been President and Vice-Chancellor of Queen's University Belfast since 2004.

Educated at Imperial College London, he was formerly Professor of Aerospace Materials and Deputy Vice-Chancellor of the University of Southampton. He has received the Donald Julius Groen Prize of the Institution of Mechanical Engineers and the Rosenhain Medal and Prize of the Institute of Materials.

He is a Fellow of the Royal Academy of Engineering and the Irish Academy of Engineering and a Member of the Royal Irish Academy. He is a Non-Executive Director of Rolls-Royce Group plc, Northern Ireland Science Park and the Universities and Colleges Employers Association.

He is a Deputy Lieutenant of Belfast and a recipient of the Flax Trust Award for services to the community.

### The Centre for Secure Information Technologies (CSIT)



## CSIT strengthens links with leading South Korean research institute

The Centre for Secure Information Technologies (CSIT) recently hosted a delegation from Electronics and Telecommunications Research Institute (ETRI), a leading South Korean centre of international expertise in telecoms and IT security. The senior delegation unveiled a plaque in CSIT reception and discussed current collaboration activities and outlined immediate plans for even greater collaboration.

Co-operation will include collaborative research and development projects to be

undertaken by staff at Queen's University's CSIT and at ETRI in South Korea. Other planned activities include joint seminars and the exchange of information, publications and personnel. The research will investigate the protection of individuals and businesses from viruses and malware and will focus on commercial opportunities leading from the research.

CSIT director, Godfrey Gaston, says: "The decision by ETRI to choose CSIT and Queen's University reflects the quality of our work here at CSIT. ETRI are an internationally renowned institute and this strengthens the already vibrant collaboration with them.



Queen's students Josh Lockhart, Stephen Madden and Gareth Smith were successful in the recent Games Fleadh in County Tipperary

## Queen's students leapfrog to success in computer game competition

Three teams from the School of Electronics, Electrical Engineering and Computer Science all picked up crystal in their respective competitions at the national Games Fleadh in County Tipperary, Ireland's largest computer and console games programming festival.

The theme this year of the XNA Game Studio Ireland Challenge was based around the well known 'Frogger' game which is currently celebrating its 30th anniversary. All teams were required to develop a modern version of 'Frogger'. One team received the award for Best in Visual Engineering from Michael

Meagher, Academic Engagement Manager for Microsoft Ireland whilst another team got the award for Best in Game Design and the third team took the overall runner up award in the competition.

Russell Kane, lecturer in Computer Science at Queen's and the mentor to the teams said: "This is an exceptional achievement for the students. It is the first time Queen's has entered the competition and to have this level of success at a national level is a huge achievement which reflects the high calibre of students and teaching on the computing courses at Queen's.

"The School this year introduced a new module on the computing courses, 'Tournaments in Computing', which is focused on entering external competitions so students may gain experience in developing and promoting their software in

a competitive environment to representatives of the computer gaming profession. It is hoped that through participation in the competitions and opportunity to network with the leading computer gaming professionals that the students will successfully pursue a career in the profession."

Another team from the School of Electronics, Electrical Engineering and Computer Science was also recently successful in making it through to the final of the recent Microsoft Ireland Imagine Cup. The team were selected by Microsoft as one of the top 12 teams in Ireland through to the final to compete for a place in the World Wide finals in New York City. The Imagine Cup is the world's premier student technology competition. Following their success in the Microsoft Imagine Cup competition, the team have subsequently gone on to enter other competitions with success. The team intend to release a phone application to the public during the summer.



Computer Science students from Queen's have won three national awards in a recent computer games competition.



*Marcus Ward from Queen's Development and Alumni Relations Office, John-George Willis from Tughans and Professor Richard Harrison, Queen's University Management School.*

## Tughans backs £15m business centre at Queen's

One of Northern Ireland's leading commercial law firms, Tughans, is supporting Queen's new £15 million Postgraduate and Executive Education Centre, which will open in the autumn.

The centre, which will be based at Riddel Hall on Belfast's Stranmillis Road, will support leaders in all sectors of Northern Ireland's economy by developing bespoke leadership and executive education programmes designed to address short and long term business challenges.

John-George Willis, Head of Corporate at Tughans, is looking forward to working

with Queen's. He believes the new Centre will be crucial to the future competitiveness of Northern Ireland, particularly in international markets. He said: "At Tughans, we have always had close links to Queen's. A large proportion of our lawyers and staff are Queen's graduates, and we are confident that both of our busy offices will benefit from the

strong support mechanisms the Queen's Postgraduate and Executive Education Centre will offer and that we will be able to make the most of the networking opportunities available."

All Founders' Club members will have the opportunity to work in partnership with the Centre's management experts from across the world to shape the content of what is delivered and ensure that courses address the challenges facing Northern Ireland businesses.

Other companies already signed up to Founders' Club include Andor Technology, Liberty IT, SHS Group, Ulster Bank, Clear Pharmacy, Eaga, Belfast Harbour Commissioners, Forward Emphasis, Phoenix Natural Gas, BT and the MJM Group. These

businesses, along with other Founders' Club members, will be able to take advantage of preferential rates on executive education programmes. They will also have the use of state-of-the-art facilities and have access to talented students as a source of future employment.

Professor Richard Harrison, Director of Queen's University Management School, explained: "The development of leadership skills is central to the transformation of businesses. For Northern Ireland to become a competitive global economy it requires access to world class management knowledge and effective policy and managerial practice."

The investment in the Postgraduate and Executive Education Centre at Queen's will see the appointment of 15 leading management professionals from across the globe. Professor Harrison continued: "We will have access to a vast range of experience and research at the Postgraduate and Executive Education Centre. We can provide off-the-shelf programmes, or, if these are not suitable we will tailor training to meet the business need."

The Postgraduate and Executive Education Centre will also fill a gap in the market as a meeting and conferencing venue. The versatile facilities on offer make it suitable for small meetings and large conferences.

## Queen's scientists unlock potential of frog skin to treat cancer

Scientists at Queen's have discovered proteins in frog skins which could be used to treat cancer, diabetes, stroke and transplant patients by regulating the growth of blood vessels.

The award-winning research, led by Professor Chris Shaw at Queen's School of Pharmacy, has identified two proteins, or 'peptides', which can be used in a controlled and targeted way to regulate 'angiogenesis' – the process by which blood vessels grow in the body. The discovery holds the potential to develop new treatments for more than 70 major diseases and conditions that affect more than one billion people worldwide.

The proteins are found in secretions on the skins of the Waxy Monkey Frog and the Giant Firebellied Toad. Scientists capture

the frogs and gently extract the secretions, before releasing them back in to the wild. The frogs are not harmed in any way during this process.

Professor Shaw said: "The proteins we have discovered have the ability to either stimulate or inhibit the growth of blood vessels. By 'switching off' angiogenesis and inhibiting blood vessel growth, a protein from the Waxy Monkey Frog has the potential to kill cancer tumours. Most cancer tumours can only grow to a certain size before they need blood vessels to grow into the tumour to supply it with vital oxygen and nutrients. Stopping the blood vessels from growing will make the tumour less likely to spread and may eventually kill it. This has the potential to transform cancer from a terminal illness into a chronic condition.

"A protein from the Giant Firebellied Toad has been found to 'switch on' angiogenesis and stimulate blood vessel growth. This has the potential to treat an array of diseases and conditions that require blood vessels to repair quickly, such as wound healing, organ transplants, diabetic ulcers, and damage caused by strokes or heart conditions.

"The aim of our work at Queen's is to unlock the potential of the natural world to alleviate human suffering. We are absolutely convinced that the natural world holds the solutions to many of our problems."

Queen's researchers received the Commendation in the Cardiovascular Innovation Award at the Medical Futures Innovation Awards in London on 6 June. The awards are one of Europe's most prestigious healthcare and business awards, rewarding innovative ideas from front line clinicians, scientists and entrepreneurs. Professor Shaw's team were the only entry from Northern Ireland to be successful at this year's awards.

Congratulating Professor Shaw and his colleagues, Professor Brian Walker and Dr Tianbao Chen, on their commendation award, Queen's Vice-Chancellor Professor Peter Gregson said: "This award is not only an honour for Professor Shaw and his team, it is recognition of the world-class research taking place at Queen's School of Pharmacy, and the life-changing potential of the University's work in drug discovery."

## Groundbreaking male infertility test could 'bring hope to millions'

A groundbreaking new test for male infertility, which will save time, money and heartache for couples around the world, has been developed at Queen's.

The medical breakthrough, known as the SpermComet, has resulted from more than a decade's research by Professor Sheena Lewis, who leads the Reproductive Medicine research group at Queen's.

The SpermComet provides unique information that no other test offers. By measuring damaged DNA in individual sperm, it can predict the success of infertility treatments and fast-track couples to the treatment most likely to succeed, leading to significantly reduced waiting times and improved chances of conception.

Professor Lewis said: "One in six couples has difficulty in having a family. In 40 per cent of cases, the problems are related to the man.

"Until now, there have been few accurate

ways of measuring a man's fertility. Traditionally, the diagnosis of male infertility has relied on semen analysis. This provides the basic information on which fertility specialists base their initial diagnosis. However, its clinical value in predicting male fertility or success with infertility treatment is limited, particularly if the semen analysis results are normal.

"The SpermComet test is so called because it looks just like a comet in the sky. The head of the 'Comet' is undamaged DNA and the tail is damaged DNA. From the tail of the 'Comet' we can measure exactly the amount of damaged DNA in each individual sperm. Good quality sperm DNA is closely associated with getting pregnant and having a healthy baby, and the SpermComet Test is the most sensitive test available for sperm DNA testing."

Professor Lewis, in partnership with Queen's venture spinout company, QUBIS, has now set up a new company to market the test, which is already available through a number of fertility clinics in Glasgow, Dublin and Galway.

QUBIS Chief Executive Panos Lioulias said: "As the number of infertile couples across Europe continues to increase by around five



*Professor Sheena Lewis, who leads the Reproductive Medicine research group*

per cent each year, the need for such a test has never been greater. The SpermComet is the most sensitive test available to help clinics tailor treatment specifically to the man's needs, bringing hope to millions of couples across the globe."

Professor Sheena Lewis has been at the forefront of research in male fertility for the past 20 years. She has led the reproductive research team in Queen's University Belfast since 1995. She is Chair-Elect of the European Society of Human Reproduction and Embryology's Andrology special interest group, the treasurer of the British Andrology Society, member of the executive committee of the British Fertility Society and past Vice-Chair of the Irish Fertility Society.



*Prof Stuart Elborn, Centre Director in the Centre for Infection and Immunity at Queen's University*

## Scientists develop first ever drug to treat 'Celtic Gene' in Cystic Fibrosis sufferers

An international research team led by Queen's University have developed a groundbreaking treatment for Cystic Fibrosis sufferers. The new drug will benefit sufferers who have the 'Celtic Gene', a genetic mutation which is particularly common in Ireland.

The study, which was carried out by scientists at Queen's University Belfast, the University of Ulster, the Belfast Health and Social Care Trust and teams of researchers in Europe, USA and Australia found significant

improvement in lung function, quality of life and a reduction in disease flare ups for those receiving the new treatment.

The drug (VX-770) is a significant breakthrough not only for those with the 'Celtic Gene', known as G551D, but also for all other Cystic Fibrosis sufferers as it indicates that the basic defect in Cystic Fibrosis can be treated. This is the first drug aimed at the basic defect in Cystic Fibrosis to show an effect. It is still too early to determine whether this treatment will improve life expectancy but the improvements in the breathing tests and the reduction in flare-ups would suggest survival will be better.

Stuart Elborn, Centre Director in the Centre for Infection and Immunity at Queen's University and co-leader of the study said: "The development of this drug is significant because it is the first to show that treating the underlying cause of Cystic Fibrosis may have profound effects on the disease, even among people who have been living with it for decades. The remarkable reductions in sweat chloride observed in this study support the idea that VX-770 improves protein function thereby addressing the fundamental defect that leads to CF."

Dr Judy Bradley, from the University of Ulster said: "This drug opens the defective channel in the lung cells of people with Cystic Fibrosis and allows proper lung clearance of bacteria.

This is a ground breaking treatment because it treats the basic defect caused by the gene mutation in patients. Correcting the cells with this mutation shows that treatments aimed at the basic mutation can work leading to improvements in lung function and symptoms."

Dr Damien Downey, from the Belfast Health and Social Care Trust said: "The success of this study illustrates the benefits that come from collaborative work here in Northern Ireland. Not only will this breakthrough help patients in Ireland and the UK but it has the potential to change the lives for those with Cystic Fibrosis around the world. As a result of the recent work researchers from Queen's University, University of Ulster and clinicians from Belfast Health and Social Care Trust have been selected to join the European Cystic Fibrosis Society Clinical Trials Network. This means Cystic Fibrosis researchers in Northern Ireland will be collaborating with their European counterparts to work toward improved treatments for Cystic Fibrosis on a global level. "

The new drug will be submitted for licensing in the autumn of this year and is expected to be available to patients by as early next year.



Fordham Law School students Jane Pakenham and Igor Rogovoy

## Northern Ireland now a seat of summer learning for leading US law students

Northern Ireland and Queen's University Belfast are fast becoming a destination of choice for summer study for students from one of America's leading law schools.

Almost 60 students and professors from New York's Fordham Law School recently arrived at Queen's for an intensive summer study programme in conflict resolution and international law.

Over the last decade, the programme, which is highly regarded by the US legal profession, has welcomed over 500 Fordham students to Queen's, many of whom have gone on to pursue distinguished careers with top US law firms.

The students and staff from New York's Fordham Law School took classes taught by Fordham and Queen's staff, visited Parliament Buildings at Stormont and met MLAs from all the major political parties. Their busy programme also included visits to the courts, the Bar Library, and the Police Service of Northern Ireland; discussions with legal practitioners, a presentation by the Historical Enquiries Team, and a tour of the North Coast – one of the world's most scenic coastal routes.

Some of the students chose to extend their stay to complete summer internships in the Northern Ireland legal sector, allowing them to apply what they have learned in the lecture hall to real life legal situations.

Igor Rogovoy from Brooklyn, New York, a second year student at Fordham, stayed in Belfast to complete an internship with the Northern Ireland Law Centre. He said: "Queen's has a reputation for excellence in legal teaching and research and the Queen's/Fordham partnership is very highly regarded. Queen's central role in the life of Belfast – a city that has moved away from conflict towards a shared future – means the University is ideally placed to learn about the complexities of conflict resolution and international law, and I am delighted to have the opportunity to study here."

Jane Pakenham, who is also from New York, said: "This programme has given me a unique insight into the Northern Ireland legal profession, and I hope to put this to good use during my summer internship with the

Royal Courts of Justice in Belfast. Outside the lecture hall and the workplace, this is a wonderful opportunity to take in the sights and sounds of Belfast and experience at first hand Northern Ireland's rich culture and world-famous hospitality."

Professor Colin Harvey, Head of the Law School at Queen's said: "This programme is a leading international example of co-operation and partnership between law schools, and further evidence of the strong connections between the US and universities on the island of Ireland. We look forward to building further on the established connections and wish the programme continued success."

Professor Michael W. Martin from Fordham Law School said: "This programme was inspired by the 1998 Belfast Agreement's cross-Atlantic and cross-border co-operation, which we are proud and fortunate to continue to nurture.

"Fordham Law students leave Belfast with rich memories of this beautiful city and a significantly deeper understanding of Northern Ireland's progress and the challenges to come."

After their two week stay in Belfast, the group travelled to Dublin to conclude the summer programme. Fordham's programme is officially sponsored by Queen's, along with University College Dublin.



## Luki Adam

**Course:**

Nursing Sciences

**School:**

Nursing and Midwifery, PhD student

**From:**

Carrickfergus, originally from South Africa

I used to drive past Queen's on my way to work a long time ago, and the main campus Lanyon Building looked so imposing. I knew a little bit of the University's history and was aware that it had an excellent reputation. I used to think that if life had turned out differently for me, I might have been able to study at Queen's. Then I applied to study Nursing Sciences at the School of Nursing and Midwifery, never thinking that I'd be accepted - and I was! It was a dream come true for me. I finished my nursing degree in February 2010 and I'm now continuing my education at Queen's studying for a PhD.

I was attracted to study at Queen's as I valued the fact that it was a member of

the Russell Group of the top 20 research-intensive universities in the UK. When I came to Queen's, I had completed short courses at university level elsewhere, but getting a prestigious degree was very important to me. I was a mature student who was a single parent with no family support and three children to look after. I finished my undergraduate degree by being presented with the Florence Elliott award for the most outstanding nursing/midwifery student of the summer graduations in 2010. I think that speaks volumes regarding the impact that Queen's has had on my life.

## INTO student takes up job at Centre

As staff at INTO Queen's prepare for summer arrivals, Student Services have recruited Le Phuong Thao as Social Assistant.

Thao completed her Graduate Diploma in Finance recently and will be studying MSc Finance in September. As part of her role she will be working alongside current Queen's students in organising social events and activities for the new arrivals.

"I'm delighted to join the INTO Queen's team, it's strange being the one to help students alongside the staff who helped me! I'm very excited about the arrival of the new students and I think one advantage to me working as social assistant is that I have experienced coming here for the first time,

making friends, so I can help them settle into the environment here and make friends."

The summer school students started at the centre on 4 July and the social assistants have a fun-filled two month event calendar planned to ensure they have the best experience possible. It will be even more special having a helping hand from someone who knows what it's like coming to the UK to study.



*Le Phuong Thao who has taken up post as Social Assistant in the INTO Queen's Centre*



## Northern Ireland's Rory triumphs at US Open

Golfer Rory McIlroy completed a remarkable four days to clinch his first major title with an eight-shot victory in the US Open.

McIlroy, who is just 22, became the youngest US Open champion since Bobby Jones in 1923 and the youngest major winner since Tiger Woods triumphed at the Masters in 1997.

He becomes the second successive Northern Irishman to win the US Open after Graeme McDowell triumphed at Pebble Beach last year and the third major champion after Fred Daly won the Open in 1947.

He is also the 11th different major winner in a row and the eighth of those 11 to be clinching their first major title. For the first time in history there have been no American winners in five successive majors.

"The whole week has been incredible - I could not have asked for any more and I am so happy to hold this trophy," said McIlroy, who rises to number four in the world rankings thanks to his win.

To read more visit

<http://news.bbc.co.uk/sport1/hi/golf/13834032.stm>

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