

# MDBSNews

School of Medicine, Dentistry and Biomedical Sciences

A photograph of three people in a laboratory setting. On the left, a man with glasses and a white lab coat. In the center, a man with glasses, a white lab coat, and a blue tie. On the right, a woman with glasses, a white lab coat, and purple gloves, holding up a flask containing a pink liquid. The background shows laboratory equipment and shelves.

## ALMAC DISCOVERY AND QUEEN'S LAUNCH £13M CANCER DRUG DISCOVERY PARTNERSHIP

Professor David Waugh (Director, CCRCB), Alan Armstrong (CEO, Almac) and Enterprise Minister Arlene Foster

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Win Free Education At Queen's

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## About **MDBS**News

Welcome to Issue 5 of the School of Medicine, Dentistry and Biomedical Sciences newsletter *MDBS News*.

Comments on the newsletter or suggestions for future editions should be forwarded to the School Office: [l.mcdonald@qub.ac.uk](mailto:l.mcdonald@qub.ac.uk)

More information on the School and latest developments can be accessed through the School website: [www.qub.ac.uk/schools/mdbs](http://www.qub.ac.uk/schools/mdbs)

Centre for Experimental Medicine,  
date of completion 2015



# QUEEN'S UNIVERSITY APPOINTS NEW VICE-CHANCELLOR

Queen's University Belfast's next President and Vice-Chancellor will be Professor Patrick Johnston. Professor Johnston, who is currently Dean of the School of Medicine, Dentistry and Biomedical Sciences at Queen's, will take up post early in 2014.

His appointment was approved in October this year at an additional meeting of Senate, Queen's governing body. Professor Johnston becomes the 12th Vice-Chancellor in the University's 168-year history.

Queen's Pro-Chancellor Sir David Fell, who chaired the appointment panel, said: "I am delighted to announce the appointment of Professor Patrick Johnston as our new President and Vice-Chancellor. Professor Johnston, a Fellow of the Academy of Medical Sciences, is an outstanding academic with a distinguished record of achievement.

Throughout his career, he has led transformational projects, and combines vision with a determination and passion to deliver change which will benefit society as a whole.

"As one of the world's foremost experts in cancer research, he has shown extraordinary leadership in making Queen's and Northern Ireland a truly innovative world-leading centre for medical research.

"I know that as President and Vice-Chancellor he will be an inspirational leader for the whole University and that exciting times lie ahead. I wish him every success."

Speaking about his appointment, Professor Johnston commented: "This is a proud day for both me and my family and I thank Queen's University for choosing me to be its next President and Vice-Chancellor. I very much look forward to leading this distinguished institution and working alongside its exceptional staff and students. It is an honour and privilege to be given this opportunity to further develop and enhance the reputation and standing of Queen's.

"In an environment that throws up many significant challenges, both at home and abroad, Queen's objective is to become an international leader in both education and research. I will work tirelessly to achieve this objective, which will bring benefits not only to the University but to the local economy and to everyone who lives in Northern Ireland."

Professor Johnston, originally from Derry/Londonderry, is married with four grown-up sons. Since 2007, he has led the development of a new international Medical School at Queen's and a world-leading Institute of Health Sciences. He is also former Director of the Centre for Cancer Research and Cell Biology at Queen's.

In 2012 he was recognised for excellence in medical science when he was elected to the Fellowship of the Academy

of Medical Sciences. Also in 2012 he accepted a Diamond Jubilee Queen's Anniversary Prize awarded by Her Majesty The Queen, for the University's leadership of the Comprehensive Cancer Centre and its achievement in reducing cancer mortality rates in Northern Ireland over the last decade.

Professor Johnston was also appointed chair of the Translational Research Group of the Medical Research Council (MRC) in 2012. He was awarded the 2013 international Bob Pinedo Cancer Care Prize, recognising his pioneering work in translating discovery science for the benefit of cancer patients. He also currently serves on the Cancer Research UK (CR-UK) Science Executive/Advisory Board.

In addition to his academic work Professor Johnston is also a founder of Almac Diagnostics, with its headquarters based in Northern Ireland.

Hear Professor Johnston talk about his appointment in a Q in 90 video [www.qub.ac.uk/home/ceao/Qtv/](http://www.qub.ac.uk/home/ceao/Qtv/)

## About Professor Patrick Johnston

Born in 1958

Received MB BCh degree in Medicine with distinction from University College Dublin in 1982

Obtained a Fellowship at the National Cancer Institute (NCI), USA in 1987

Promoted to senior investigator status at NCI in 1991

Appointed Professor of Oncology at Queen's in 1996

Became Director of CCRCB in 2004

Appointed Dean of the School of Medicine, Dentistry and Biomedical Sciences in 2007

Professor Patrick Johnston



# NEW £4M CENTRE ENABLES MORE PATIENTS TO TAKE PART IN CLINICAL TRIALS IN NORTHERN IRELAND

A new £4M clinical research hub, which opened in Belfast on 18 September will enable more patients than ever before to take part in clinical trials in Northern Ireland.

The facility will also benefit those with rare conditions, who, until now, have had to travel to England to participate in trials.

It is a joint venture between Queen's University Belfast, The Belfast Health and Social Care Trust, The University of Ulster and Health and Social Care Research and Development (HSC R&D), a division of the Public Health Agency (PHA).

Based in Belfast City Hospital, the NICRF has the infrastructure to support clinical trials from conception to completion. With dedicated staff, the NICRF now allows researchers to access a specialised area for clinical research, including equipment not available in the NHS. It contains ten clinical rooms, a blood processing facility and a diet kitchen for nutrition studies.

Researchers hope that hundreds of patients will be offered the chance to take part in clinical trials each year, leading to a major increase in numbers previously enrolled in research studies in Northern Ireland.

Speaking ahead of the launch, Health Minister, Edwin Poots MLA, said: "This new state-of-the-art facility is an important element of Northern Ireland's health research infrastructure and will enhance our ability to

produce valuable, useable results. "Across the Northern Ireland Health and Social Care Trusts, we have invested significantly, especially in the past five years, so that our professional staff can undertake research directly relevant to their patients and practice and can use the knowledge gained from that research.

"Research, development and innovation are essential for modern healthcare systems so we can advance the quality of our services, whether in disease prevention, diagnosis or treatment. Research also provides vital knowledge that can improve the cost-effectiveness and value for money of our health services."

A number of programmes are already underway. These include studies on asthma, cystic fibrosis and bronchiectasis. Others are focusing on cardiovascular conditions including stroke and rare genetic conditions including Morquio syndrome.

Professor Danny McAuley from the School's Centre for Infection and Immunity, and Acting Director of NICRF, said: "Researchers throughout Northern Ireland are making some of the most important scientific discoveries in the world today. Until the NICRF there was no dedicated area with such an array of specialist equipment to support clinical research in Northern Ireland. Now, we will be able to translate laboratory discoveries into advances in patient care. We are tremendously grateful to the Wellcome Trust, the Wolfson

Foundation and Health and Social Care Research and Development within the PHA for their vision and support in funding the facility which is already bringing real benefit to patients here."

Aidan Kearney, who has been one of the first patients to be treated in the new facility, said: "Already the NICRF is having a positive impact to my life. I now don't have to go outside of Northern Ireland for my treatment and that means it takes much less time. I'm not tired from the travelling and I also now have the reassurance that the location and staff treating me will be the same every time. It has made a real difference to me."

Welcoming the opening of the new facility, Lord Mayor of Belfast, Councillor Máirtín Ó Muilleoir, said: "This new state of the art facility represents a fantastic step forward in clinical research trials. It provides a base for our medical researchers to carry out their important and ground breaking work."

Dr John Williams, Head of Clinical Activities at the Wellcome Trust, said: "Working with patients is a crucial part of the Wellcome Trust's mission to turn laboratory discoveries into improvements in human health. This new facility will act as a focus for clinical studies in Northern Ireland, providing core resources for internationally recognised research."

Paul Ramsbottom, Chief Executive of The Wolfson Foundation, said: "The Wolfson Foundation's funding is focussed on excellence, and so we are delighted to be



*Pictured in the new Vision Imaging Room in the NICRF are: Professor Danny McAuley, Health Minister Edwin Poots, Vittorio Silvestri and Graham Young from the Belfast Health and Social Care Trust and Dr Ruth Hogg from Queen's Centre for Experimental Medicine*

involved in this outstanding new facility. We hope that the research undertaken will be of significant benefit to patients in Northern Ireland - and beyond."

Colm Donaghy, Chief Executive, Belfast Health and Social Care Trust, added: "Having this facility in Belfast City Hospital means we will see more patients enrolling in clinical trials. They will learn more about their diseases and as a result help to define how we go about treating them. The NICRF also provides new opportunities for the doctors, nurses and other health professionals, including physiotherapists and nutritionists, within Belfast Trust, to take part in training programmes, all of which will enhance their skills and further enhance our patients' treatments and outcomes."

Professor Hugh McKenna, Pro-Vice-Chancellor at the University of Ulster, said: "This facility is very much a collaborative venture and we look forward to working with our partners to produce research findings that have global impact."

The facility will have four core staff as well as a Director and Deputy Director but more staff can be accommodated depending on the needs of the trial.

Professor Bernadette Hannigan, Director of HSC Research and Development, said: "People throughout Northern Ireland, including patients of our Health and Social Care Trusts, will benefit from the opportunity to take part in clinical research in the high quality, safe environment of this new Clinical Research Facility."

Researchers who would like to use the NICRF or members of the public who would like to participate in research can contact 028 9504 0342. Further information is also available online at [www.qub.ac.uk/nicrf](http://www.qub.ac.uk/nicrf).

# ATHENA SWAN SILVER AWARD – MDBS GENDER EQUALITY OFFICE

In 2011, the Head of School, Professor Patrick Johnston established the Gender Equality Office (GEO) in MDBS. The first of its kind within a Queen's school, it was a response to an external peer review that challenged the School to improve on its gender equality record.

Under the current leadership of Dr. Karen McCloskey, who outlines her role below, the GEO implements the School's Silver SWAN action plan. The GEO is located within the School Office in the Health Sciences Building and is staffed by Mrs Louise McDonald (Clerical Support).

## Role of the GEO Director

"I was appointed as GEO Director in May 2013, for 3 years having served on the School's Gender Equality Committee and led our successful SWAN application as Acting Director in 2012. My involvement with the Queen's Gender Initiative as a member of the Executive Committee and co-organiser of the Women in Leadership conference, 2011 has provided me with an insight into the excellent standing of Queen's with Gender Equality and Athena SWAN.

Over the last year, I've been able to assess where we are as a School, both quantitatively through data analysis and qualitatively sensing the culture by speaking with students and staff. The School has continued to make good progress in both areas. As a Biomedical Science student in the 1990s, I was taught by men, for the most part. Today students in Biomedical Science are taught by a more gender-balanced team (6F, 8M). This demonstrates how the gender balance of teaching staff has developed over time.

It is encouraging that staff are increasingly aware of the culture change within

the School where practices that were initially considered to benefit women with caring responsibilities are also benefitting male colleagues. These practices include flexible working and core-hours meeting times. Nevertheless, there are a number of key areas to be addressed, particularly at senior academic levels; around 20% of our professoriate are female and only 2 of our 14 Centre Directors/Deputy Directors are female.

The GEO Director job description indicated that 1 day per week would be required for the role. However, in practice, I have found that the real challenge is in prioritising tasks and time management. This academic year is particularly busy as the implementation of the SWAN Action Plan is the main focus of the GEO and many of the programmes/initiatives are not currently part of the School calendar. The SWAN Action Plan has been externally peer-reviewed and is available as part of the application document on the GEO website. <http://www.qub.ac.uk/schools/mdbs/AboutUs/GenderEqualityOffice/>. Our future application for a Silver renewal or a Gold award depends on the success of the Action Plan evidenced by data showing progress towards Gender Equality in all aspects of our work and practice.

The GEO Director role brings other responsibilities including membership of the School Management Board, School Tenure Review Board, Recruitment/

Selection panels, the University SWAN Steering Group and the University SWAN Champions Network. This benefits the School, ensuring that Gender Equality permeates all aspects of our work. It is also my role to ensure that Gender Equality is an integral component in key decision making. To that end, Key Performance Indicators relating to Gender Equality for the annual review of Centres are currently being implemented.

## Gender Equality Committee

The SWAN Action Plan for the School is ambitious and given the size of the School, its full implementation is a significant challenge. The assistance of Louise McDonald in the GEO is vital to enable the programme of work to be carried out. Louise joined Queen's in September 2013 having previously worked in Waterford School of Nursing, NIMDTA and more recently in the business sector in the USA. She is very enthusiastic about her role in the GEO and has got to know and work with many of our staff over the past 3 months.

The work of the GEO is co-ordinated by the Schools Gender Equality Committee which comprises representatives of academic, research, administrative and technical staff. This academic year, committee members include myself as Chair, Dr Aisling Keane, Dr Derek Brazil, Prof Louise Cosby, Dr Marie Cantwell, Dr Michelle McKinley, Dr Nuala Tipping, Dr Thamarai Schneiders, Dr Ultan Power,

Karen McCloskey, Director of Gender Equality (left) and Louise McDonald, Clerical Support (right)



Prof Ken Mills, Dr Valerie Holmes, Dr Caitriona Holohan, Dr Janitha Costa and Mrs Louise McDonald. In addition, Prof Yvonne Galligan (Queen's Gender Initiative Director) and Mr Paul Browne (Equal Opportunities Unit Manager) act as expert advisors to the committee.

The committee members are an enthusiastic and very friendly team who have individual responsibilities for the initiatives and activities of the GEO. Membership is rotated with members serving around 2 years. While our major focus is the SWAN Action Plan to promote the careers of women, many of our initiatives are open to men, particularly PhD students and postdoctoral fellows. I am very grateful for the motivation and diligence of present and past members who make my job much more enjoyable when they email articles of interest or provide links to people in other Medical Schools who are working in the area of SWAN/Gender Equality.

## Work of the GEO

As Director, I am committed to supporting the careers and work-life balance of all of our staff and students, particularly that of our female colleagues who are currently under-represented at senior level.

The office has an open door policy and we welcome all views and suggestions.

Part of our remit is "Active Surveillance" – ensuring that seminar series,

committees, boards and panels have gender balance. Over the last year, there have been many examples of where this has been inadvertently overlooked and no female speakers or staff were included, but decisive action was taken once the issue was highlighted.

So why is Gender Equality important when the School has so many other priorities? People – our greatest asset is our people. Creating a culture that fosters excellence in all of our staff will have lasting benefit for our students,

our research programmes and our engagement with the community. Evidence nationally and internationally shows that this does not happen by itself but with supportive leadership and staff who have bought in to the vision. The School will continue to be a great place to work and study."

## Professor José Bengoechea

I joined Queen's in July 2013, as Professor of Molecular Microbiology in the Centre for Infection and Immunity (CII), having spent the previous 12 years working at the Foundation Caubet-CIMERA/CSIC, a Spanish research centre mostly devoted to respiratory diseases located in Palma de Mallorca (Spain).

I completed my degree in Biology and acquired further specialisation in Microbiology in the University of Navarra, Pamplona, Spain. In 1997, I completed my PhD thesis in Pamplona under the supervision of Professor Ignacio Moriyon and Ramon Diaz. Our work provided compelling evidence for the notion that the surface of pathogenic bacteria contains distinct features absent in the surface of non-pathogenic microorganisms which is a well-accepted concept nowadays. After getting training on biochemistry and biophysics during my PhD, I decided to get specialized training on molecular microbiology of the bacterial surface. In 1998, I went to the laboratory of Professor Mikael Skurnik (Turku, Finland). During the following five years, we studied the molecular basis of bacteria surface regulation and its impact on bacterial pathogenicity. This generated knowledge was applied to create a set of attenuated strains suitable for the delivery of heterologous antigens which could be used for vaccination purposes. In 2002, after obtaining a "Miguel Servet" tenure-track contract, funded by the Spanish Ministry of Health, I started my independent research career at University Hospital Son Dureta (Palma de Mallorca) reaching the rank of Head of Research in 2004. One year later, I was appointed the first Director of the Infection and Immunity programme at Foundation Caubet-CIMERA/CSIC (Palma Mallorca)]. In 2007, I earned an associate research professorship position in the Spanish Research Council (CSIC) and in 2012, I was appointed as Scientific Director of the Foundation by the Board of Governors.

My scientific approaches have been influenced by the dual need to decipher infection as microbe-cell cross talks,

and to analyse infectious diseases in an integrative dimension encompassing host responses. The long term goal of the laboratory has been to decipher the network of interactions between pathogenic bacteria and various cell types contributing to the onset of innate immune responses. I am convinced of the strong potential of applying a multidisciplinary approach to the field, interfacing immunology, cell biology, molecular microbiology, and experimental medicine to shed light on questions such as: what are the different modes of microbial adaptation to the host, how hosts respond to microbes and how microbes respond to the host. We are keen in defining the mechanisms by which pathogens manipulate for their own benefit early innate immune responses. This knowledge should speed up the development of new tools to control infectious diseases, the discovery of new antibacterial targets as well as the development of novel immunoadjuvants.

It is my strong belief that to solve major health problems it is imperative to bring together the concerted efforts of scientists from different disciplines. Therefore, the group has actively participated in different research consortia at the European level. Currently, I coordinate the network INBIONET ([www.inbionet.eu](http://www.inbionet.eu)), acronym for Infection Biology Network, funded with €4M by the Marie Curie Initial Training Network Programme. Under the framework of INBIONET, leading European institutions from five different countries are joining efforts to train the next generation of European young scientists in the field of microbial anti-immunology.

However, at this point in my scientific career, I was looking forward to finding new challenges in a more

competitive research environment, with the vision of translating our basic research knowledge into new therapies and informed treatment stratification. The School of Medicine, Dentistry and Biomedical Sciences, and particularly the Centre for Infection and Immunity (CII), does offer a unique opportunity to conduct inter-disciplinary research of excellence in a collaborative way between basic and clinical scientists. Certainly, I consider my appointment to the School as a major milestone in my career. My research programme will greatly benefit from the interaction with top-class clinical discovery programmes which will facilitate the translation of my basic research discoveries to pre-clinical trials. CII is already becoming a leader in fundamental and translational research in the area of respiratory infections, asthma and chronic obstructive pulmonary disease and I look forward to contributing to the outstanding performance.

Professor José Bengoechea



## Professor Mark Lawler

I joined Queen's in late March 2013 as the Chair in Translational Cancer Genomics in the Centre for Cancer Research and Cell Biology (CCRCB) at Queen's.

At Trinity College Dublin (TCD), I began a lifelong engagement with Genetics and its central involvement in human health and disease. During my PhD, I began to work in the nascent translational medicine space, demonstrating how increased understanding of leukaemia biology could inform clinical application. Two early publications (Blood 1991, N Engl J Med 1993), underpinned a molecular test for assessing the success of bone marrow transplants in leukaemia; the technology we pioneered is now in routine use in clinical diagnostic laboratories worldwide. This work was recognised by international awards (British Society of Haematology 1991, European Blood and Bone Marrow Transplant Group 1993) and led to me receiving the St Lukes Medal for Cancer Research (1996). I was awarded Membership (1999) and Fellowship (2006) of the Royal College of Pathologists on the basis of my published works.

At this time, I expanded my research field to prostate cancer, establishing an active group with a particular focus on the genetics of prostate cancer. I co-founded the Prostate Cancer Research Consortium, an interdisciplinary trans-institutional initiative.

The collaborative multidisciplinary approach is one that I believe brings most benefit for the cancer patient. I continued to publish in a variety of high impact journals and received the Graves Medal for Research (2004). My work on genetic epidemiology has advanced the field in the molecular epidemiology of multiple myeloma. In addition, a fruitful interdisciplinary partnership in drug discovery and drug development culminated in a critical paper in Cancer Research in 2009.

My vision for translational research, refining discoveries from the research laboratory and translating them in the clinical arena, led to the establishment of the Cancer Molecular Diagnostics Laboratory (CMD), the first of its type in Ireland. My role as its first Director highlighted my ability to motivate and inspire clinicians and scientists in a project that has made a significant contribution to patient care. I believe that I can provide transformational leadership in translational cancer research, which can help Queen's in its aim to achieve world class standing in this distinctive research theme. I am extremely excited to be joining a group of like-minded individuals here at Queens, who understand how high quality collaborative science can impact on the lives of cancer patients and their families.

Cancer is our common enemy; we should be competing against this devastating disease, not against each other.

I am a firm believer that research leadership should also reflect teaching leadership, and have been at the forefront of academic teaching, defining and implementing policy in my role as Director of Postgraduate Teaching and Learning at TCD, whilst also developing and delivering a series of innovative education programmes, particularly in 4th level education. I was a founding member of the MSc in Molecular Medicine at TCD and led a number of international initiatives including the Eurolife Joint Programme in Translational and Experimental Medicine. I was a key contributor to the development of the new MRes in Translational Medicine here at Queen's, which I see as a flagship for a new model for postgraduate education within the School of Medicine, Dentistry and Biomedical Sciences, where students gain not only academic and research skills, but are also exposed to new areas such as management and entrepreneurship, thus providing a unique skills set that makes them competitive both nationally and globally. I look forward to contributing to the School's internationalisation strategy, particularly in the context of postgraduate education and research for the School.

I have a keen interest in cancer policy and was an active member of the Ireland-Northern Ireland-National Cancer Institute Consortium, serving on its SAB and acting as Chair of the Scholar Exchange Committee. I sit on a number of EC/ERC Committees and am project lead in a pan European initiative on improving cancer care for the citizens of Europe.

I am married to Ruth and have two children Sarah and Emily. I am a regular supporter of the arts and am involved in a number of literary/cultural heritage projects. I am also an avid sports fan.

Professor Mark Lawler



Professor David Waugh (Director, CCRCB), Alan Armstrong (CEO, Almac) and Enterprise Minister Arlene Foster



## ALMAC DISCOVERY AND QUEEN'S LAUNCH £13M CANCER DRUG DISCOVERY PARTNERSHIP

A new £13 million partnership to accelerate cancer-focused drug discovery in Northern Ireland was launched by Enterprise Minister Arlene Foster MLA on Wednesday 4 September 2013.

As part of the project, Queen's and Almac Discovery have announced the scheduling of a phase one clinical trial for ovarian cancer, involving the first novel cancer drug fully developed in Northern Ireland. Involving up to 60 ovarian cancer patients, the drug being trialled has been created as a result of an earlier collaboration between Almac Discovery and Professor Tracy Robson from the School of Pharmacy at Queen's. Explaining about the trial, Professor Robson said: "This latest trial involves a new treatment for cancer known as ALM201, which rather than attacking tumours directly, prevents the growth of new blood vessels in tumours, starving them of oxygen and nutrients and thereby preventing their growth. It targets tumours by an entirely different pathway to those treatments currently approved."

Alan Armstrong, CEO of Almac added: "Bringing new treatments to patients is a complex process. The announcement of this new clinical trial, which is the result of a previous partnership between Almac

and Queen's School of Pharmacy, is a timely illustration of how collaboration between the University and industry is already creating novel approaches to cancer therapy which have a very real chance of helping patients."

Enterprise Minister Arlene Foster, said: "This significant investment in research and development will enhance collaboration between academia and industry. This will ensure the investment is maximised, that research is effectively commercialised and that ultimately, enhanced treatment solutions are made available to cancer patients."

It was also announced that a new CCRCB/Almac Discovery joint programme in Cancer Drug Discovery will bring researchers from Queen's University Belfast's Centre for Cancer Research and Cell Biology (CCRCB) and scientists from Almac Discovery together to translate research discoveries into treatments for patients.

The two projects represent a total investment of £13M, with £7 million of support offered by Invest Northern Ireland, which includes part funding from the European Regional Development Fund. As a result of the joint programme,

17 scientists from Almac Discovery have been seconded to Queen's CCRCB in an industry led venture. The discovery team will work to identify parts of tumours which are susceptible to treatment by cancer drugs and to then develop the new drugs to target them. The partnership will also enable new approaches to selecting those patients who will be most likely to respond to the new drugs, and to create the technologies needed to deliver the drugs directly to the tumour site in the patient.

The new discovery programme is being led by Professor Tim Harrison, Vice President of Discovery Chemistry with Almac Discovery. As part of this partnership, Professor Harrison has been appointed McClay Chair of Medicinal Chemistry at Queen's for the next three years. Commenting on the new partnership, he said: "While Almac Discovery and Queen's have already been successfully collaborating for a number of years, this exciting new programme is bringing together for the first time, under one roof, some of our most talented scientists. As a result we expect to see an increase in both the breadth of drug targets we are able to identify and a subsequent increase in the development of potential therapeutics for patients."

## 2013 UNORTHODOX PRIZE GOES TO EVIDENCE AID

Disasters affect millions of people and cost billions of dollars, but people affected and those trying to help them don't always have good access to the best information on what they might do.

Evidence Aid will change this. It was awarded the 2013 Unorthodox Prize, for an extraordinary and innovative approach to improving the lives of the world's most disadvantaged people. Evidence Aid was established by members of one of the world's largest organisations in evidence based health care, The Cochrane Collaboration, and seed funded by the Collaboration and the scientific publisher Wiley. It now works with many humanitarian agencies across the world.

Evidence Aid makes it easier for people in the disaster and humanitarian sector to find reliable, independent information on interventions and strategies that might help, as well as identifying those that are ineffective or might even be harmful. Professor Mike Clarke, one of the founders of Evidence Aid who is based in the School's Centre for Public Health said, "People affected by disasters deserve the best care and those making decisions need the best evidence on what works, doesn't work and is unproven. Evidence Aid will meet that need."

Evidence Aid helps planners, policy makers, doctors, nurses, charity workers and others before, during and after natural disasters and other humanitarian emergencies. The Unorthodox Prize of \$10,000 and potential for follow-on funding will support this work and help Evidence Aid reach its full potential. Evidence Aid was selected from more than 250 entries from around the world.

Evidence Aid was established following the tsunami in the Indian Ocean in December 2004. It uses knowledge from systematic reviews to provide reliable, up-to-date evidence on interventions that might be considered in the context of natural disasters and other major healthcare emergencies. It seeks to provide this information to agencies and people planning for, or responding to, disasters, humanitarian crises and major healthcare emergencies. It already provides free access to more than 100 Cochrane systematic reviews and the collection of relevant reviews is expected to more than double in the next year.

Evidence Aid currently has just two staff, but is supported by a small group of volunteers and lots of good will around the world. It has bases in Oxford, the Centre for Global Health in Trinity College Dublin in Ireland and the Centre



Professor Mike Clarke



for Public Health at Queen's University Belfast. Professor James McElroy, acting Vice Chancellor at Queen's University Belfast said "We are delighted with this recognition for Evidence Aid. It is a core component in the University's work to connect evidence, practice, practitioners and the public and we look forward to its continued growth and impact."

"Congratulations to Evidence Aid on this award. It recognises the contribution it makes to planners, policy makers and responders before, during and after natural disasters and other humanitarian emergencies through the provision of critical content to help save lives," said Deborah Dixon, VP & Publishing Director, Health Sciences, Wiley. "As publishers of The Cochrane Library, we are proud to be a founding partner of Evidence Aid."

# QUEEN'S SCIENTISTS IN €6M BID TO FIND NEW CYSTIC FIBROSIS TREATMENTS

Queen's is a lead partner in a new €6 million (euro) global research programme to develop new ways to treat Cystic Fibrosis.

Affecting more than 10,000 people in the UK, Cystic Fibrosis (CF) is one of the most common life-threatening inherited diseases. Symptoms include repeated chest infections, the major cause of death for patients.

The new global programme, known as CF Matters, aims to develop personalised antibiotic treatments for these chest infections. The work could revolutionise the practice of antibiotic prescription and limit resistance to the drugs globally.

The study brings together renowned CF clinicians and scientists from 12 academic institutions and hospitals across Europe and the USA. It is led by University College Cork with Queen's as a lead partner. It will involve lab-based research and clinical trials with 252 patients in seven countries, including around 40 in Northern Ireland.

Queen's lead on the study is Professor Stuart Elborn, Director of the School's Centre for Infection and Immunity (CII). An internationally recognised CF expert, he led the original trial for a drug which has now been approved for use by CF patients with the G551D gene mutation or 'Celtic Gene'. The drug Ivacaftor, also known as Kalydeco, treats the root cause of CF for people with the Gene.

Professor Elborn said: "When patients have a flare-up they are treated with several antibiotics but it isn't always effective and can lead to antibiotic resistance. In this study we will use molecular next generation DNA

sequencing methods to detect all the bacteria present in the sputum of CF patients and use this knowledge to determine what antibiotics should be used in individual patients.

"This personalised antibiotic treatment will be compared with standard therapy for CF patients. We will determine the patient's immune response to all the different bacteria present in the sputum. Using models of infection we will also discover the effect of these bacteria on lung inflammation and infection. The overall impact will be to determine if all bacteria present contribute significantly to lung infection in CF patients and subsequently identify the most effective antibiotic treatment for patients infected with these bacteria."

The study will involve a team of scientists from the Centre for Infection and Immunity including Professor Cliff Taggart, Dr Rebecca Ingram and Dr Sinéad Weldon and Dr Michael Tunney from the School of Pharmacy.

They will collaborate with Dr Damian Downey, Co-Director of the Regional Adult Cystic Fibrosis Centre in the Belfast Health and Social Care Trust. Dr Downey said: "This important collaborative study with our colleagues in Queen's University will investigate the use of directed antibiotic therapy to treat lung infections. The aim of a more focused treatment plan is to limit the damage that occurs to the lung."

The CF Matters grant comes just weeks after Queen's work on managing Bronchiectasis, another chronic lung condition affecting thousands of people in the UK, was published in leading scientific journals.



Professor Stuart Elborn will lead the study at Queen's

The three papers by Dr Michael Tunney from Queen's School of Pharmacy and Professor Elborn, address key issues in the management of the condition, including the detection of bacteria that cause lung infection and how long-term antibiotic use to treat Bronchiectasis can result in antibiotic resistance.

Commenting on the work, Dr Tunney said: "We found that large numbers of different types of bacteria were present both when bronchiectasis patients were stable, and during a lung infection. The results clearly demonstrate that routine diagnostic techniques do not detect many of these bacteria."

"Further studies are required to better understand the relationship between the presence of the bacteria found in the lungs of Bronchiectasis patients and the severity of the condition. More research is also needed into the effects of long-term antibiotic use and development of antimicrobial resistance."

For more information on the Centre visit <http://www.qub.ac.uk/research-centres/CentreforInfectionandImmunity>



Dr Dermot O'Reilly

## DR DERMOT O'REILLY, CENTRE FOR PUBLIC HEALTH, LEADS THE NEW NORTHERN IRELAND ADMINISTRATIVE DATA RESEARCH CENTRE

**A new £7 million research centre opening in Belfast is to use the vast amount of electronic data generated every day in Northern Ireland to lead to a better understanding of the economic and social issues affecting people's lives here.**

Dr Dermot O'Reilly, from the School's Centre for Public Health, is the Director of the new Northern Ireland Centre. He said: "We now live in a Big Data era. This is a very exciting opportunity to unlock the full research potential of the vast amounts of valuable and existing anonymised administrative data that is routinely collected everyday. By joining different administrative datasets we will be able to provide a better understanding of the social, environmental and health issues that affect people's lives and to contribute more robust evidence to inform policy development and evaluation. For example, from linked education, training and employment data we hope to be able to inform policymaking decisions in relation to the factors influencing social mobility."

The amount of data now produced worldwide every two days is equivalent to the amount generated between the dawn of humanity and 2003 and the new Northern Ireland Administrative Data

Research Centre (ADRC) will enable researchers to understand Northern Ireland's economic and social issues.

David Willetts MP, the UK Minister for Universities and Science, announced the new centre as part of a £64m investment across the UK. The centres will be located at the Universities of Southampton and Edinburgh, Swansea University and Queen's University Belfast, with the administrative data service to be based at the University of Essex.

The Northern Ireland centre is a joint partnership between Queen's University and the University of Ulster, funded by the Economic and Social Research Council (ESRC) and the Health and Social Care Research and Development Division of the Public Health Agency (HSC R&D Division).

The region is already home to a number of firms examining 'big data'. In May, accountancy firm Deloitte expanded its Technology Studio in Belfast, where staff specialise in data analysis to help improve service for clients. And Datactics, a company which spun out of Queen's University Belfast a decade ago, employs around 12 people at the Northern Ireland Science Park, along

with an office in the USA. Stuart Harvey joined the company from Wombat, the Belfast-based financial software company which was bought over by the New York Stock Exchange's technology division in 2008. He said that 'big data' could be Northern Ireland's next niche market.

"We have made a really good job of creating employment in sectors like capital markets and financial services. Big data could be the next big trend, building analytics to extract knowledge from a huge amount of information being generated," he said.

# CII SCIENTIST TO TARGET CYSTIC FIBROSIS SUPERBUG

Queen's University Belfast is to lead a £139,000 study into the way cystic fibrosis patients are affected by a superbug that destroys lung function.

The research, funded by the Cystic Fibrosis Trust will investigate how the immune cells of cystic fibrosis patients are infected when they contract Burkholderia Cepacia (B.cepacia). The superbug can colonise in people with cystic fibrosis causing serious lung damage.

The two-year study will be coordinated by Professor Miguel Valvano, Chair of Microbiology and Infectious Diseases in the School's Centre for Infection and Immunity. There are around 500 people living with cystic fibrosis in Northern Ireland, and the B.cepacia bug affects around six per cent of people with the illness.

Professor Valvano said: "We have reached a point in which it may be possible to directly identify molecules that can help immune cells, especially those that engulf bacteria to deal with the intracellular B.cepacia. Our research effort will be focused on developing the appropriate procedures that will enable us to screen libraries of chemical compounds to find molecules that can help cystic fibrosis patients' immune cells clear invading bacteria."

Professor Valvano aims to develop a better understanding of how cystic fibrosis affects the normal functioning of cells and how B.cepacia disrupts cell breakdown in people with cystic fibrosis. The second stage in the project will involve developing a quick and efficient way of testing large numbers of compounds with a view to finding a drug that can effectively treat B.cepacia.

Dr Janet Allen, Director of Research at the Cystic Fibrosis Trust, said: "Professor Miguel Valvano is one of the world's leading experts in this field. His molecular research aimed at dissecting key bacterial components that directly interact with host cells to cause infections is internationally recognised.

"A key part of the Cystic Fibrosis Trust's research strategy is supporting research aimed at finding new ways to treat chronic infection and inflammation in people with cystic fibrosis. In people with cystic fibrosis certain bugs are able to turn the body's immune system against itself by disrupting the normal processes for dealing with invaders and causing harmful levels of inflammation. They are also very difficult to treat because they are able to block conventional antibiotics."



Professor Miguel Valvano

## £2.25 MILLION TRIAL FOR VASCULAR DEMENTIA TREATMENT AT QUEEN'S

Researchers in the School's Centre for Public Health aim to find out if a drug for blood pressure could be effective in treating vascular dementia in a new £2.25million clinical trial.

The trial, which is funded jointly by the Alzheimer's Society and the British Heart Foundation, is the first ever large clinical trial for patients with subcortical vascular dementia.

Vascular dementia is caused by problems with the blood supply to the brain and affects over 150,000 nationwide and 18,000 people in Northern Ireland. Those with high blood pressure, heart conditions, high cholesterol and diabetes are especially at risk, and it can be triggered by a stroke. There are currently no available treatments for vascular dementia.

Researchers from the School's Centre will recruit nearly 600 people with vascular dementia for the trial. The researchers, led by Professor Peter Passmore, hope to show that 10mg a day of the drug can significantly improve memory and cognitive health. As amlodipine is already licensed and known to be safe, the treatment – which costs the NHS just £1.07 a month – could be in use as a treatment within five to ten years.

Amlodipine belongs to a class of drugs known as calcium channel blockers, which are widely used to treat high blood pressure. This will be the largest study to specifically test the drugs in people with vascular dementia, the most common type of dementia after Alzheimer's disease. This trial will test the drug on people with the most common form of vascular dementia, but not in those whose condition was triggered by stroke.

Amlodipine is used to treat high blood pressure, a major risk factor for vascular dementia. It is known to enter the brain and researchers think it might work by protecting brain cells from damage when blood supply to the brain is poor.

Professor Peter Passmore from the School of Medicine, Dentistry and Biomedical Sciences, and lead investigator, said: "Vascular dementia is a very common disease and to date no major trial has been successful in developing an effective treatment for this disease. We hope, using evidence from previous research, and by trialling the drug amlodipine we may get a step closer to improving the outcomes of patients with vascular dementia within the next decade."

Jeremy Hughes, Chief Executive at Alzheimer's Society said: "It's scandalous that despite affecting 150,000 people there are no effective treatments for vascular dementia and very few new treatments under investigation. This groundbreaking trial could be the best hope we have to get an effective treatment in use in the next decade.

"Developing new drugs from scratch can cost hundreds of millions and take up to twenty years but our flagship Drug Discovery programme aims to test existing drugs in people with dementia, fast-tracking the process and bringing new treatments to market faster and more cheaply."

Professor Peter Weissberg, Medical Director at the British Heart Foundation said: "The 2.3 million people living with coronary heart disease in the UK are at increased risk of developing vascular dementia. Unfortunately, as yet, there are no effective treatments for this devastating condition.

"Amlodipine is a widely prescribed, blood pressure lowering treatment that has shown some promising effects in vascular dementia. The BHF and Alzheimer's Society have joined forces to fund this definitive study. If positive, it would pave the way for an affordable treatment for vascular dementia in the near future."



Professor Peter Passmore

## QUEEN'S HOSTS WORKSHOP ON THE USE OF EPO IN THE TREATMENT OF ANAEMIA IN CANCER PATIENTS

The EPOCAN Consortium, funded by an FP7 grant from the European Commission, held a Workshop at Queen's on 7 and 8 October, attended by 30 leading investigators drawn from universities and SMEs in Switzerland, Germany, Spain, the Netherlands, Austria, the UK and Israel.

Erythropoietin (EPO) is the hormone that controls red blood cell production, and is used to treat anaemia. The intention of the European collaboration is to determine whether EPO treatment is suitable for all cancer patients who suffer from the very debilitating effects of anaemia due to their chemotherapy treatment, or whether it should be restricted to certain individuals. The project aims to work towards better and safer treatment for all cancer patients who suffer from anaemia, including patients being treated in Northern Ireland.

As part of the meeting programme, the EPOCAN delegates and colleagues from Queen's were greeted by the Deputy Lord Mayor of Belfast, Alderman Christopher Stalford, before attending a Gala Dinner at Belfast City Hall.



Delegates at the EPOCAN Workshop at Riddel Hall

The leader of the Queen's research group, Professor Terry Lappin (CCRCB), said: "It is a great privilege to work with this wonderful group of European experts. I commend the dedication and persistence of my Queen's colleagues in the EPOCAN group, Dr Perry Maxwell, Dr

Mohamed El-Tanani and Dr Kyle Matchett and many others who had collaborated on EPO projects over the years, particularly Professor Peter Maxwell."

## REPORT FROM THE 4TH INTERNATIONAL CONFERENCE IN 'QUANTITATIVE BIOLOGY AND BIOINFORMATICS IN MODERN MEDICINE'

From 19-20 September 2013, 14 speakers from 5 countries gathered at the beautiful Riddel Hall in Belfast to present the newest findings of their research

After the welcome address, provided by Professor Patrick Johnston, Dean of School, the keynote lecture with the title 'Modeling Endocrine Resistance in Breast Cancer' was presented by Robert Clarke from the Lombardi Comprehensive Cancer Center, Georgetown University Medical Center (USA). Interestingly, the common theme that emerged from all the different talks presented during the 2-day meeting was the realization that complex diseases like breast cancer can only be understood with a systems approach, casting the shadows of genomic and systems medicine. This culminated in the talk given by Sol Efroni, from The Mina and Everard Faculty of Life Science, Bar Ilan University (Israel), with the intriguing title 'The Network is a Biomarker in Cancer Signatures.'



Frank Emmert-Streib of the School's Centre for Cancer Research and Cell Biology said: "We are proud that we were able to organize this conference for the fourth consecutive year. Initially started from funding provided by the Department for Employment and Learning through its "Strengthening the all-Island Research Base" initiative, which ended a couple of years ago, the conference is its living legacy, and we would like to thank everyone who helped us to make this a sustainable event."

The organizers of the conference, Frank Emmert-Streib, Peter Hamilton and Shu-Dong Zhang, would like to congratulate the winners of this year's poster competition, Fabio Liberante and Qing Wen, for their valued contribution.

## ULSTER CARPETS AND QUEEN'S IN HEALTH PARTNERSHIP

Over the next three years, Queen's PhD student Desiree Schliemann from the Centre for Public Health (CPH), will undertake a systematic review of the scientific literature examining the effect of workplace interventions to increase fruit and vegetable intakes.

Qualitative research will explore the views of workers on their diets during working hours and the possibility of introducing strategies to increase fruit and vegetable intake through free fruit provision, changes to menu planning, food choices and food presentation within cafeterias.

Speaking at the launch of the £60,000 studentship, set up by Ulster Carpets and funded by the John Wilson Memorial Trust, Nick Coburn, Managing Director of Ulster Carpets and Chairman of the Trustees said: "The health and well being of all Ulster Carpets' employees is very important to us so we are delighted to be involved in this research through the John Wilson Memorial Trust. I hope that this study will have a long term impact on Public Health in the local community and Northern Ireland as a whole."

Despite the knowledge that fruit and vegetable-rich diets are good for health, intake is still below recommended levels in Northern Ireland. Diets rich in fruit and veg can reduce the risk of chronic disease, including heart disease and cancer, and help with obesity prevention and weight maintenance.

CPH Director, Professor Ian Young, said: "The support offered by the John Wilson Memorial Trust in the form of this PhD studentship, is central to the work of the Centre for Public Health, which seeks to improve public health by encouraging lifestyle change. Desiree Schliemann will focus her PhD research on interventions to promote a healthier diet in the workplace."



L-R: Nick Coburn (MD Ulster Carpets), Desiree Schliemann (PhD student), Professor Ian Young (Director of the Centre for Public Health at Queen's) and Jeremy Wilson (Trustee of the John Wilson Memorial Trust).

The challenge facing public health specialists is to encourage more people to eat their 5-a-day and to sustain this behaviour in the long-term. The information collected as part of the PhD has the potential to impact directly on the health of people in Northern Ireland.

Visiting the Co Armagh factory for the first time, Desiree Schliemann said: "I am delighted to be the recipient of the Ulster Carpets Studentship and I am grateful to all those involved with the John Wilson Memorial Trust and the Centre for Public Health at Queen's University Belfast, for making this important research possible.

"Working closely with staff at Ulster Carpets in Portadown, my work will explore strategies to help people increase their fruit and vegetable intake and to make smart food choices that will contribute to their overall well-being and aid the prevention

of chronic disease, including heart disease, diabetes and cancer.

"Without the funding which the John Wilson Memorial Trust is providing over the next three years, I am certain that this important research would not be possible."

The John Wilson Memorial Trust support for the studentship is one of a number of medical fundraising initiatives which are part of the Queen's University 'Beyond' campaign. The Campaign is focused on improving outcomes for patients in many of the major diseases of the 21st century through speeding up the process of taking new lab discoveries through to the patient's bedside.



## SECOND SUMMER SCHOOL IN COMPUTATIONAL BIOLOGY

This year the Second Summer School in Computational Biology took place from 16-18 September 2013.

The meeting gathered 25 students from 5 countries, making it the largest Summer School so far. During 3 intense days, 18 lectures were provided by 10 instructors, covering topics from introductory lectures for the statistical programming language R, microarray and next-generation sequencing (NGS) data to advanced analysis methods, including clustering, classification and survival analysis. The underlying theme of this year's Summer School was the importance of reproducible research. In this respect, the key role of the statistical programming language R was discussed as a natural and efficient mediator between data, analysis methods and the conservation of the whole analysis process in a way that allows an error-free exchange/communication of a conducted analysis.

As a highlight of the Summer School Benjamin Haibe-Kains, from the Institut de Recherches Cliniques de Montreal (Canada), was invited to give a talk entitled 'Significance Analysis of Prognostic Signatures.' This allowed the students to 'see' the translation of analysis methods into clinical practice, which helped to realize the importance of computational biology. Frank Emmert-Streib of the School's Centre for Cancer Research and Cell Biology (CCRCB) said: "We are pleased to see the increased interest in the Summer School, because it forms an integral part of the education of students at Queen's, together with the newly established MSc in Computational Biology and the Conference in Quantitative Biology and Bioinformatics in Modern Medicine." The third Summer School in Computational Biology is anticipated to take place in September 2014.

## MEDICAL STUDENTS AMONG NORTHERN IRELAND'S BRIGHTEST STUDENTS TO WIN FREE EDUCATION AT QUEEN'S

Of the 10 of Northern Ireland's brightest and best young people who have each won a free education at Queen's, sharing a total of almost £150,000, 3 are medical students.

- Thomas Lee (Mullaghbrack), past-pupil of St Patrick's Grammar School, Armagh
- Beth Malcomson (Newtownards), Bloomfield Collegiate School
- Sophia Turner (Glengormley), Dominican College, Belfast.

As a Queen's Scholar, the students, who began their studies at the University in September 2013, will each have their annual tuition fees paid by the University for the duration of their undergraduate degree.

The awards are worth a total of almost £150K to the 10 winning students, who were selected from 138 students nominated by 74 schools and colleges across Northern Ireland.

Each school or college was asked to nominate those pupils who could demonstrate exceptional achievements outside academic life, whether in sport, music and the arts, business and enterprise or through community work, with a particular focus on leadership, enterprise and social responsibility.

Prior to the winners being announced, a shortlist of 51 pupils attended a selection day at Queen's where they were assessed on a range of competencies by a number of business leaders, including Queen's Graduate of the Year and RTE Dragon's Den star Ramona Nicholas.

Announcing the winners, Isabel Jennings, Director of Student Plus at Queen's, said: "Each of the Queen's Scholars has demonstrated exceptional leadership and enterprise skills and an outstanding commitment to social responsibility which, alongside their academic strengths, mark them out as the best and brightest young people Northern Ireland has to offer.

"I am delighted to welcome them to Queen's. I am sure they will each make a valuable contribution to university life and embrace the many opportunities on offer here. A Queen's degree is about much more than an education. We offer a complete student experience, and are among the top 15 universities in the UK for student satisfaction according to the National Student Survey.

"We are committed to supporting the ambitions of all our students and nurturing their talents, inside and outside the lecture hall, to ensure they realise their full potential. We look forward to supporting the Queen's Scholars and all their fellow students, and inspiring them to become the leaders of tomorrow."

Anthony McGrath, Student Recruitment Officer at Queen's, said: "The Queen's Scholars awards are among the most prestigious available from any UK university.

They are the latest addition to Queen's annual undergraduate scholarship package, which is worth £300,000 per year, benefits approximately 200 students, and represents a crucial investment in Northern Ireland's future prosperity.

"Queen's is committed to investing in the delivery of an exceptional academic and non-academic student experience, leading to excellent career opportunities for our graduates. Our aim is to provide students with the life skills that will allow them to contribute to the Northern Ireland community, both professionally and culturally. That is why our scholarships include awards for students across all disciplines."

For more information on the Queen's undergraduate scholarships visit [www.qub.ac.uk/scholarships](http://www.qub.ac.uk/scholarships)



## SAM LOCKHART, FOURTH YEAR MEDICAL STUDENT, ON HIS INTERNSHIP DURING THE SUMMER OF 2013 AT THE JOSLIN DIABETES CENTRE IN BOSTON

In 2011/12 I completed a project for my intercalated degree in the Centre for Experimental Medicine (formerly the Centre for Vision and Vascular Science) under the supervision of Dr David Grieve.

This work stimulated an interest in cardiovascular biology and diabetes complications. It was this interest that prompted me to apply for a paid internship in the Joslin Diabetes Centre in Boston. This Harvard affiliated Centre is the world leader in diabetes research and has pioneered developments in the treatment and understanding of diabetes complications.

I was lucky enough to receive a place working as a research intern in the Dianne Nunnally Hoppes Laboratory for Diabetes Complications under the supervision of Christian Rask-Madsen from the Vascular Biology section. My project focused on trying to establish why people with diabetes do not form new blood vessels very well in their limbs or heart in response to a reduced blood supply or injury. It has been shown that an inability of the endothelial cell to respond to insulin contributes to this phenomenon; therefore, we hypothesised that genes regulated by insulin in the endothelial cell may be important in this process. I helped to analyse data validating targets from a candidate list and went on to provide preliminary evidence that these targets are important regulators of blood vessel formation at least in test tube models. I also had an opportunity to provide input into a project examining how endothelial cell insulin resistance may contribute to the increased incidence of colorectal cancer in patients with type 2 diabetes.

I received expert tuition while at the Joslin Diabetes Centre. Dr Rask-Madsen and his post-doctoral fellow Xuan Chun Wang served as excellent teachers; they were always keen to engage in scientific debate and showed constant commitment to helping me develop my repertoire of laboratory skills. While they were extremely supportive they also gave

me the independence to take my work forward of my own accord. This stretched me to develop my own hypotheses and to design and carry out experiments under little to no supervision. While this was challenging it has really developed my ability to think critically and increased my confidence in my own ability.

All in all this was a fascinating experience that provided me with a unique opportunity to gain research experience in a leading centre and to gain a sense of the working culture in academia in the United States. One of the most inspiring aspects of the whole internship was to work in a centre wholly dedicated to diabetes care with the treatment of patients being carried out on site. The centre has a clear mission "....to prevent, treat and cure diabetes. Our vision is a world free of diabetes and its complications". The commitment to this vision was held by all staff and this unity of purpose created a great working environment. Moreover, seeing patients come and go for their treatment on site served as a constant reminder of why I was there and helped root what was reasonably abstract work in a concrete clinical goal.

In summary, the internship at the Joslin Diabetes Centre provided me with a wonderful opportunity to enhance my understanding of the molecular pathogenesis of diabetes complications and to develop as a scientist. I would highly recommend a studentship at home or abroad as a way of fostering an interest in basic science and developing basic laboratory skills.

Sam Lockhart, 4th year medical student at the Joslin Diabetes Centre in Boston

I would also like to thank the School of Medicine, Dentistry and Biomedical Sciences' Scholarships Committee for providing me with the additional financial support to undertake this role and to extend my gratitude to everyone who supported my application.



## BiMOMEDICAL TEAM (CENTRE FOR BIOMEDICAL SCIENCE EDUCATION STAFF)

Queen's University is the first University in the UK to launch a University-wide Movember campaign raising money and awareness of prostate and testicular cancer and men's mental health issues.

In support of this worthwhile charity, staff from the Centre for Biomedical Sciences Education put together a team of Mo Bros and Mo Sistas.

What began with 8 clean shaven males (Dr. Abdul Al-Modhefer and Dr. Stephen McCullough even shaved off their existing goatees which have been permanent features for many years), progressed to varying degrees of manly facial fuzz! Mo styles ranged from the Biker, the Hulk Hogan, the Fu Man Chu and the Mexican; even female staff had sported their own (fake) versions of Mo styles! Here is a photo just 2 weeks in! You will find the final amount raised on the Centre Facebook page and final images of the BiMomedical Mo Bros. <https://www.facebook.com/pages/Centre-for-Biomedical-Sciences-Education/384365684968565?ref=hl>

The Centre for Biomedical Sciences "BiMomedical" team



## STAFF TAKE A BITE OF QUEEN'S

To coincide with October's Breast Cancer Awareness Month and Movember, staff from across Queen's University got the opportunity to find out about some of the cancer research taking place at the University during two recent A Bite of Queen's tours of the Centre for Cancer Research and Cell Biology.

As part of each tour, staff heard from Helen Barnes, Head of Medical Fundraising, and Professor David Waugh, Director of CCRCB, who gave an overview of the impact of the work taking place within the Centre. Professor Joe O'Sullivan also spoke at the introduction to the Prostate Cancer lab tour.

During the tours, staff were guided around the Northern Ireland Molecular Pathology Laboratory by Dr Perry Maxwell and Dr Pamela Maxwell and heard about the work of the Breast Cancer Laboratory and Prostate Cancer Laboratory from Dr Kienan Savage and Dr Stephen McQuaid.

CCRCB is the latest venue to be added to the A Bite of Queen's campus tours, which give staff the opportunity to go behind the scenes of some of the University's buildings and find out about the work that goes on in them. So far over 100 members of staff have taken part in tours of the Lanyon Building, Riddel Hall and CCRCB.



Dr Perry Maxwell introduces staff to the Northern Ireland Molecular Pathology Laboratory

# FIRST STUDENT COMPETITION A BIG SUCCESS

The first Student Competition sponsored by Queen's and CRUK saw 10 finalists enjoy a day in the labs on 13 September 2013. The students submitted a poster designed to promote the CCRCB and a particular type of cancer or research.

They started the day with a talk by Dr Karen McCloskey which was followed by a careers 'speed dating' session that gave them a flavour of the range of careers available in cancer research. They then spent the rest of the day in the labs under the direction of Dr Jules Gorski and team. They performed DNA extraction, PCR and immunofluorescence microscopy.

At the end of the day, their parents and teachers were invited to a reception where Professor David Waugh, Director of the CCRCB, announced the winner of the poster competition – Aaron Carlisle – and presented him with an iPad, courtesy of Almac. The winning poster featured a heart wired with dynamite and focused on computational research as a key way to 'help defuse the time bomb' of cancer.

The CCRCB/Nikon prize of a digital camera, sponsored by Vector Scientific/ Nikon, was awarded to Daryl Hinchcliffe for her striking image of a young girl looking up into a microscope with the headline 'only research funded by our generation can save hers'.



Students Jordan Kelly, Daryl Hinchcliffe, and John Baxter working in the CCRCB labs under the supervision of researcher Alex Powell

Winning poster by Aaron Carlisle

CCRCB/Nikon prize winning poster by Daryl Hinchcliffe

## THIS IS S.W.O.T.

The Students Working Overseas Trust (S.W.O.T) is a charitable society, run exclusively by 4th year medical students at Queen's University Belfast. The society formed in the 1980's, and to date it is estimated that over £1 million has been raised.

S.W.O.T's aim is to raise money for Third World Hospitals where the 4th year medical students spend their summer elective. They use their own money for travelling expenses so EVERY penny raised goes directly to the target hospitals. The students work in conjunction with the hospitals to discuss where the money is needed most. Examples of what the money is spent on include, vaccines, medications, hospital equipment and rural clinics.

This year, S.W.O.T has released a charity single and music video in a new strategy to hit their £50,000 target for the year.

The song was written and performed by the 4th year medical students with each verse describing what S.W.O.T is about. There is even an impressive rap thrown in for good measure. S.W.O.T's President Jonny McDowell explained, "The idea came about last year when Seán McNicholl (a fellow medical student) jokingly suggested that we should release a music video to raise money for S.W.O.T. What he didn't anticipate was me taking him seriously!" Jonny went on to say, "So far we have received a fantastic response with over 28,000 views on YouTube but we need people to download the song at <http://www.youtube.com/watch?v=M7Cdnf2AbRg>."

S.W.O.T. is certainly an exceptional charity with the advantage of young, creative and enthusiastic individuals at its helm.



Jonny McDowell and the S.W.O.T. team

The track 'This is S.W.O.T' can be downloaded from iTunes and all major online distributors for an inexpensive 99 pence.

## Focus on Staff

# 'TROUBLES' SURGEON TOLD ALL IN THE UNITED STATES

Professor Roy Spence, Centre for Medical Education, in addressing several thousand US surgeons reflected on his experience of treating hundreds of victims of the Northern Ireland 'Troubles' and also reflecting on the latter years of more peaceful times.

He delivered the prestigious I.S. Ravdin Lecture in Washington on 7 October of 2013, which was a great honour as this has never been offered to a surgeon in Ireland before.

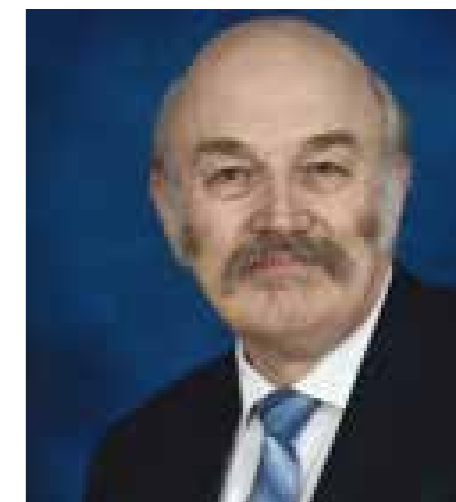
A surgeon for 35 years in Northern Ireland throughout most of the country's conflict, which came to be known as 'The Troubles', Professor Roy Spence, OBE, JP, MD, LLD (Hon), FRCS (Edin, Irel), FRCS (Eng, Glas) (Hon), reflected on his professional life during this time period when he presented 'Reflections of a Surgeon in Troubled Times'.

From the late 1960s until 1998, when the Troubles ended with the Belfast/

Good Friday Agreement, more than 3,600 were killed and more than 47,500 were injured in 36,900 shootings and 16,200 bombings. Professor Spence discussed how those incredibly tough circumstances brought advances to trauma practice in Northern Ireland.

Professor Roy Spence, said: "I paid tribute to my colleagues in vascular surgery who used shunts in injuries to limb arteries and veins caused by gunshot wounds and, in particular, the unique injury knee-capping in Northern Ireland. I recalled the work of colleagues in neurosurgery who proposed early ventilation of patients with gunshot wounds of the head and the replacement of missing skull fragments, caused by bullets, with titanium plates."

Finally, Professor Spence acknowledged the leadership shown by Senator Mitchell and President Clinton in the Peace Process and also to Northern Ireland's First and Deputy First Ministers, who as the Peace Process



Professor Roy Spence

matures, have allowed Northern Ireland to attract bright clinicians and scientists from all over the world to work in Belfast to improve the outcome for all patients.

## PRIZES AND MEASURES OF ESTEEM

Congratulations to Dr Aidan Cole who has received this year's St Luke's Medal for the best clinical radiotherapy research project in Ireland. The medal was awarded for his study investigating radiobiological modelling and dose escalation in lung cancer, following the introduction of 4D-CT scanning in the Northern Ireland Cancer Centre. Dr Cole was presented with his medal by Prof Phillip M. Devlin from the Dana-Farber Cancer Institute on 28 September 2013 at the Royal College of Surgeons in Dublin.

Prof Phillip M. Devlin presents the St Luke's Medal to Dr Aidan Cole



# DEVELOPING OPPORTUNITIES FOR INTERNATIONAL YOUNG RESEARCHERS IN THE RADIATION SCIENCES

Dr Karl Butterworth from the radiation biology group in the School's Centre for Cancer Research and Cell Biology (CCRCB) has been taking an international lead in developing initiatives for young scientists in the radiation sciences.

At the US Radiation Research Society annual meeting in New Orleans, Karl took up his position as Chair of the Scholars-in-training Committee of the Radiation Research Society. He now leads an international committee of 10 young investigators, representing the interests of over 400 Scholars-in-Training within the top International Radiation Research Society ([www.radres.org](http://www.radres.org)). Within Europe, Karl has also been working with a group of scientists led by Dr Luca Marriotti from the University of Pavia, Italy, (who is a previous visiting researcher from the Radiation Biology

Group at CCRCB) to establish a similar initiative for European Radiation Research Scientists called EURays. This seeks to provide support and sustainability for young scientists in the radiation research field in Europe. Details can be found at [www.eurays.eu](http://www.eurays.eu).

The initiative was recently launched at the annual European Low Dose Programme meeting. EU funded research in low dose radiation protection is being coordinated by a platform called the Multidisciplinary European Low Dose Initiative (MELODI). Queen's University Belfast recently became an official member of the MELODI platform. Professor Kevin Prise (CCRCB) who will represent the University in MELODI said: "Our membership is testament to our strong radiation science program and puts us at the heart of the future European strategy for Low Dose Radiation Research."



Dr Karl Butterworth

## COCHRANE PROFILE: PROFESSOR MIKE CLARKE

Professor Mike Clarke, Director of the All Ireland Hub for Trials Methodology Research in the Centre for Public Health, features in the latest video in The Cochrane Collaboration's celebratory series for its 20th Anniversary. Mike is the last of eight people to be profiled in the series, and was asked to talk about his views on the future of the Collaboration and systematic reviews. The video can be viewed at this link <http://www.youtube.com/watch?v=U4ahQS-428c>



Professor Mike Clarke

## SCHOOL SUCCESS IN VICE-CHANCELLOR'S IMPACT PRIZE COMPETITION

Congratulations to Professor Richard Kennedy from the School's Centre for Cancer Research and Cell Biology, who was named the winner of the Vice-Chancellor's Impact Prize at an awards ceremony on Friday 15 November 2013. Professor Kennedy and his team have developed tests to personalise cancer treatment worldwide. His leading-edge translational research on prostate, colon and breast cancer is informing the options for patients, giving them a better chance for recovery and survival.

Dr Ruth Hunter, from the School's Centre for Public Health, won the Early Career Researcher Prize for her work on the Parc Study – Physical Activity and Regeneration of Connswater – which has engaged with the community to provide improvements in public health.



Professor Richard Kennedy

## Focus on Students

### BDA NORTHERN IRELAND BRANCH STUDENT PRIZE

This year we had the first ever BDA Northern Ireland Branch Student Prize. BDA teamed up with First Trust Bank and worked with Queen's University to bring a £500 prize fund to 4th year students, associated with the module on Special Care Dentistry.

The prize was all about demonstrating how the dentist communicates and interacts with patients and carers when some form of special need must be considered in that interaction.

The panel were delighted with the entries and awarded 1st Prize Kerry Hobson; 2nd Prize Orla McCann and 3rd Prize Rebecca McCarey.

Seamus Killough, President Northern Ireland Branch said 'I am immensely impressed by the standard of entries to this first round of the new prize. This demonstrates how the Branch can support students with their studies.'



Prizewinners Kerry Hobson (1st Prize), Orla McCann (2nd Prize) and Rebecca McCarey (3rd Prize) pictured with Claudette Christie Director BDA Northern Ireland, Seamus Killough President BDA Northern Ireland Branch and Aisling Press First Trust Bank

### JOHN WIDDECOMBE AWARD 2013

Centre for Infection and Immunity PhD student, Rebecca Clarke won the John Widdicombe award for the best oral presentation at the 4th American Cough Conference. She was up against strong international competition (14 other presenters!). Well done Rebecca!



### FACULTY OF DENTISTRY, RCSI PROFESSOR JOHN MCGIMPSEY PRIZE

The Faculty of Dentistry at RCSI recognises the talent and potential of our dental students.

This year, the Faculty awarded the Professor John McGimpsey Prize to Ms Emily Lovegreen (a final year dental student at Queen's University Belfast in 2012/13). The prize is awarded to the final year dental student who achieves the highest marks in Oral Surgery in their final year.

The prize was established in memory of Professor John McGimpsey, Consultant in Oral Surgery, Director of Teaching & Learning/ Department Head at the Queen's University and Royal Victoria Hospital Belfast. He was also Dean of the Faculty of Dentistry, RCSI, from 1998 – 2001.



Professor Alan Smyth (Nottingham University) – Guest Speaker; Nathan Cantley, David Carroll, Jack Thompson (QUAMS)

### INSPIRE – STUDENT RESEARCH SYMPOSIUM

A very successful Student Research Symposium organised and led by QUAMS – the Queen's Academic Medicine Society – was held in Riddell Hall on 23 October as part of the INSPIRE programme. The guest speaker was Professor Alan Smyth from Nottingham whose keynote speech was entitled, Clinical Research – why, how where when? The students engaged in a series of Workshops led by various staff on, How to Publish Your Work, Developing your CV, Summer Studentships, Intercalated Degrees and Academic Foundation Programmes. Students presented posters of their work and prizes were presented. This event provided a focal point for the medical students to engage with the various research opportunities available.



Emily receiving her Award from Professor Gerry Kearns, Dean of Faculty at the Faculty's Annual Scientific meeting on 25 October 2013.

