



Impact Report

MAKING A DIFFERENCE TO RESEARCH AT QUEEN'S



Pictured Front: Julie Loughery, Teresa Sloan, Graham Loughery, Padraig Diggins. Back: Dr Kieran Savage & Mr Stuart McIntosh. Read the full story on page 3.

The Patrick G Johnston Centre for Cancer Research is focused on translational research, which takes scientific research and applies it to patient care – bringing it from laboratory bench to patient bedside. For all 300 of our researchers, the focus is always on aiming to improve outcomes and quality of life for patients. Here in Belfast we specialise in prostate, breast, ovarian, colorectal and blood cancers, but in recent years we are proud to have expanded our expertise into pancreatic, oesophageal and brain cancer research.

Generous support from The Queen's University of Belfast Foundation, the registered charity of the University, ensures we have the staff, training and equipment

we need to undertake novel cutting-edge research that gives us insight into how cancer develops, and how we can better diagnose and treat it. Acting as seed funding, your gifts help us to generate the evidence that we can use to apply for larger grants and ultimately bring our discoveries back to the clinic and to patients. In addition to our research, thanks to your support, we continue to develop the best scientific minds here in Northern Ireland by investing in education and training.

We value each and every philanthropic gift that we receive through the Foundation. Overleaf you will see just a few incredible examples of how your gifts have impacted on our research. My colleagues and I really

appreciate your trust and I know it inspires us all to work harder towards making a difference. We hope that you will continue to support us so that together we can improve patients' lives now and in the future.



Professor Chris Scott, Acting Director of the Patrick G Johnston Centre for Cancer Research

QUEEN'S HONOURS FORMER VICE-CHANCELLOR

In January, Queen's University renamed its flagship Cancer Research facility to The Patrick G Johnston Centre for Cancer Research. Formerly known as the Centre for Cancer Research and Cell Biology (CCRCB), The Patrick G Johnston Centre for Cancer Research honours the far-reaching influence and impact of the University's previous President and Vice-Chancellor, Professor Patrick G Johnston.

The event provided a chance for the Queen's community and University partners to join Professor Johnston's family and celebrate a friend and colleague who attracted renewed focus on Queen's as a world-class international university.

Among those present at the event was Professor Johnston's widow, Iseult and their sons Seamus, Eoghan, Niall and Ruairi along with members of the extended family circle.

The evening also offered a unique opportunity to come together and reflect on some of Professor Johnston's key achievements.

Speaking at the renaming, Queen's President and Vice-Chancellor, Professor Ian Greer, commented: "This is a very special occasion. Today we pay tribute to Paddy and recognise him as a person who had an unparalleled profound impact, not just on this University, but on the lives of so many people here in Northern Ireland and across the world.

"This Centre was Paddy's vision and we as the Queen's family are proud to bear his name to honour his lifelong dedication in tackling the deadly disease."

Passionate about patient care, Professor Johnston was a world-leading pioneer and advocate for cancer research and public health. He led the modernisation of cancer services across Northern Ireland, including the development of a state-of-the-art Clinical Cancer Centre and the previously known Centre for Cancer Research and Cell Biology (CCRCB) at the University, which opened in 2007.

Putting the Centre on the map, Professor Johnston developed key international collaborations such as the National Cancer

Institute – All Ireland Cancer Consortium, which focused on cancer prevention, public health, cancer treatment and clinical trials on a global scale.

Among other highlights, Queen's advances in cancer research under Professor Johnston's leadership were recognised with a coveted Queen's Diamond Jubilee Anniversary Award in 2012. This was based on Professor Johnston's leadership of the NI Comprehensive Cancer Services programme, which led to a marked reduction in cancer mortality rates locally.

Professor Chris Scott, Acting Director of the new Centre, commented: "With the dedication of this building in his honour, we re-dedicate ourselves to his original vision, to address the needs of our patients through clinically informed research and to be the central hub of cancer research and education in Northern Ireland with a global impact."



Pictured at the retitling event (L-R): Acting Director of the Centre Professor Chris Scott; Iseult Johnston and Vice-Chancellor Professor Ian Greer.

PERENNIALS MAKE AN IMPACT

Twenty members of the Perennials RFC cycled in the Giro d'Italia Gran Fondo NI for ovarian cancer research. Thanks to their friends, family and community, they raised an incredible £15,000 in memory of Lesley Porter.

The funds went towards Dr James Beirne's work in early detection of aggressive BRCA ovarian cancers. The test developed by the research team is pushing the boundaries of current technology, extracting tiny quantities of cell-free DNA from ordinary blood tests which are then tested for a minute proportion of early stage tumour DNA. This test could be an early warning and potentially allow for population level screening for ovarian cancers.

The funds from the Perennials were essential in allowing James' team at the PGJCCR to check their preliminary work in an extra 25 patients, refining their techniques and their analytics even further. With this additional data, they have enough evidence to apply for larger grant funding which could support their work for several years.

Inspired by their cycling success and conversations with Queen's researchers, the Perennials went on to host an incredible Day at the Races for 350 people, raising £10,000 for pancreatic cancer

research and multiple sclerosis research which is carried out in the neighbouring Wellcome-Wolfson Institute for Experimental Medicine. Perennial Geoff Goldsbrough said: "It's such a shame more people aren't aware of the research happening at Queen's! We are proud to have helped to make a difference."



Pictured with Teresa Sloan Head of Health Fundraising and Dr Yvonne Dombrowski Lecturer & Principle Investigator at Queen's are (L-R): Perennials Geoff Goldsbrough, Tommy Bowe and Mark Goldsbrough

ESTABLISH A SCHOLARSHIP AT QUEEN'S

Dr Colin Mathews (BCh...1979) established a scholarship in recognition of his family's tradition of medical graduates that has spanned five generations and produced almost 50 physicians throughout the world.

This scholarship is awarded annually to a Queen's medical student so they may undertake the intercalated degree MSc (Res) Cancer Studies. This includes an extensive project and dissertation in breast cancer research in memory of Dr Mathews' late wife and medical partner, Trish Mathews.

Sinead Donnelly, the first Mathews Scholar in 2016, said: "The research I carried out allowed me to understand the journey from 'bench to bedside'. I was able to see first-hand how new

treatments are developed and trialled. Now, starting my foundation year, I am able to see patients receiving these treatments in person, and to see how novel therapies are used to treat cancer."

The 2017 scholar Christopher Madden McKee, who is keen to encourage more people like Dr Mathews to support scholarships, said: "An intercalated degree is a fantastic opportunity for medical students to develop key transferable skills which will be necessary to deliver true evidence-based medicine in the future. Your generous support makes a big difference in enabling students to have this opportunity."

Current student Charles McGreevy said: "The diversity within the course has provided me with a fantastic wealth of

knowledge in diagnosis, treatment and current understandings of cancer. I highly enjoyed meeting Dr Mathews and being able to feedback on all the skills and knowledge I have developed over the year. I am very grateful and hope myself to be able to fund a student scholarship later in life!"

Dr Mathews enjoys meeting and getting to know the scholars each year while remaining an important part of the Queen's family 40 years after graduating. Speaking recently about the personal benefit of his ongoing involvement with his alma mater he said: "To give back to the University directly to medical education, and to improve the skills of a student, has been hugely rewarding."



Sinead Donnelly



Christopher Madden McKee



Charles McGreevy

BREAST CANCER PATIENT RAISES £60,000 FOR PGJCCR

Julie Loughery, with the help and support of her family and friends, held a charity BBQ, auction and stock judging night and raised a staggering £60,000 to be used to support breast cancer research at the Patrick G Johnston Centre for Cancer Research (PGJCCR).

In May 2018 Julie was diagnosed with breast cancer. However, after a difficult journey going through chemotherapy and eventually a mastectomy she is now 'loving life again'.

Julie said: "Thanks to the staff and surgeons at Altnagelvin Area Hospital I am feeling fit, healthy and enjoying life. The kindness, care and attentiveness I have received have been second to none, and I decided I wanted to give something back to help support others battling this disease.

"My surgeon Mr Pdraig Diggin recommended the Queen's Foundation, and in particular the breast cancer research that is carried out at the PGJCCR

with 100% of the money raised going directly into research in Northern Ireland."

Julie continued: "I had hoped the BBQ would raise a substantial amount, but have been blown away by the generosity of local people, and am delighted to be able to visit PGJCCR and see what the researchers at Queen's are doing with the money, so that I can tell everyone who supported me what a difference their donations are making."

Mr Stuart McIntosh, Consultant Breast Surgeon and Clinical Researcher at PGJCCR said: "It is due to donations from donors like Julie and her husband Graham that we are able to carry out the

groundbreaking work we do into breast cancer research at Queen's. I would like to express my personal thanks to the family for this significant gift.

"Due to our research more than 85% of women live beyond five years after their diagnosis, with new tests developed to help decide which therapies will work for which patient therefore helping to personalise breast cancer treatment. Supporters like Julie can help us develop new treatments faster and change the lives of women with breast cancer and their families."



INSIGHTS FROM CLINICAL ACADEMICS

Professor Joe O’Sullivan

In 2004, there were almost no treatments for prostate cancer. So when the late Vice-Chancellor, Professor Patrick Johnston, offered Joe O’Sullivan a role as a clinical academic at Queen’s he could not resist the opportunity to change that.

In his role, Joe has focused on radiotherapy treatments for advanced prostate cancers, and 15 years later, there are now several treatment options available to his patients and survival rates are much better. Joe has played a key role in developing one treatment in particular, Radium 223, which is now administered throughout the UK, ensuring all patients receive a more effective and targeted treatment for prostate cancer, thanks to clinical trials led by Belfast.

Being a clinical academic allows Joe to combine the highest level of patient care with scientific discovery, a perspective that is a real asset to patient-focused translational research at Queen’s. Joe estimates 800 Northern Irish patients have been involved in 30 different clinical trials over the last 10 years. His next focus is to develop ultra-precise radiotherapy that will allow treatment times to be reduced from eight weeks to just one week – a much more practical treatment plan for patients.

“I feel a huge responsibility to those generous patients and their families who support my research and I spend it as best I can on their behalf, investing in our local doctors and researchers.”



Qualified doctors who combine working as a specialist

WHAT IS A CLINICAL ACADEMIC?

doctor with research and teaching responsibilities. They make a vital contribution at every research stage – from early biomedical research understanding disease pathways, through to drug development and personalised medicine.

To achieve that impact, Joe has grown the prostate research team to over 40 researchers since he began. Funding from the Queen’s Foundation has allowed him to support development, training and travel for young researchers, as well as filling unavoidable gaps in grant funding that would otherwise mean staff needing to leave research.

Professor Mary Frances McMullin

Professor Mary Frances McMullin is an international expert in acute myeloid leukemia (AML) and myeloproliferative neoplasms (MPN) – both types of rare blood cancers. As a clinical academic, she splits her time between Belfast City Hospital, where she is a consultant haematologist and Queen’s, where she participates in research, clinical trials and teaching the new generation of doctors as the Professor of Clinical Haematology.

Through Queen’s and the Belfast Health and Social Care Trust, Mary Frances is able to recruit over 90 per cent of her AML patients to clinical trials, giving them early access to new treatments and the very best standards of care. She is also collaborating with Queen’s colleagues in the Centre for Public Health on the biggest ever epidemiological study of MPN, comparing 500 patients and controls to better understand the long-term factors that may contribute to this rare disease.

As Mary Frances nears retirement, her priority is to train the next generation of clinical academics, medical doctors who choose to complete a research PhD later in their training.

Having graduated from Queen’s as a medical student, Mary Frances then completed a research degree and gained four years’ experience as a Senior Registrar in London before returning to Queen’s as a Senior Lecturer in 1991. Belfast is one of 13 UK ‘trial acceleration’ centres for blood cancers, helping establish whether new treatments are safe and effective as quickly as possible.

“They have a different way of thinking ... medical training helps you as a researcher start with the patient, to understand the disease experience and clinical need.”



Dr Niamh Buckley

Dr Niamh Buckley works in the School of Pharmacy, where her research focuses on understanding breast and ovarian cancer with a particular focus on triple negative breast cancer and the gene BRCA1.

“I am so grateful to the patients who consent to have their data and samples used for research, and the clinicians who collaborate with me to ensure my work is applicable to patients and hospitals.”

After earning her degree in Biochemistry from Trinity College Dublin she completed a PhD at Queen’s, beginning her research career in the Patrick G Johnston Centre for Cancer Research (PGJCCR) before moving across the campus to the School of Pharmacy as a Lecturer in 2016. Working in the School of Pharmacy allows Niamh to ensure her work is relevant to patients by not only using biological knowledge to improve treatment options but also allowing her to look at improving drug formulations and/or delivery, leading to better outcomes and fewer side effects for patients.

Working in Belfast, with the Northern Ireland Biobank, the Northern Ireland



Cancer Centre and PGJCCR just minutes away, allows Niamh to use their unique resources. This includes information from patient samples including gene and protein expression as well as clinical outcome which are analysed using bioinformatics to help predict patient outcomes and find new drug targets.

Over the years the Queen’s Foundation has helped support Niamh in her work, she also works closely with BRCA Link NI to inform local patients about new research at an annual conference, details at <http://www.brcani.co.uk/>.

ENTWISTLE TRAVEL FUND MAKING RESEARCH POSSIBLE

In September 2016, Dr Philip Dunne was awarded the Entwistle Family Travel Scholarship, which allowed him to undertake numerous placements over the course of a year collaborating with the University of Turin, a world leading institute in pathology and bioinformatics.

International collaboration is essential for a career in cancer research, and two years later, Philip credits this relationship with his new role as Lecturer in Molecular Pathology and Principal Investigator of his own group of colorectal (bowel) cancer researchers.

Together with several post-doctoral researchers, five PhD students and a technician, his team is able to bring together expertise in tumour biology, data analysis and pathology to improve the biological understanding of colorectal cancer and solve one important question: why do patients with colorectal cancer respond differently to cancer treatments?

Most recently, Philip was the lead for Queen’s in a successful Accelerator Award bid for £5m from Cancer Research UK and principal cancer research charities in Spain and Italy. “The main

reason Queen’s was able to become involved is because of our ongoing collaborations with Turin, Oxford and Glasgow, which are thanks to the Entwistle Family Travel Scholarship,” said Philip. The five-year programme will set up an international cross-platform initiative that will validate translational research for colorectal cancers and, if successful, will ultimately improve the chances of successful outcomes for clinical trials in patients with cancer.



Dr Philip Dunne (back right) pictured with his student group of colorectal cancer researchers

KEY DATES



**24 SEPTEMBER 2020
– WORLD CANCER
RESEARCH DAY**

**4 FEBRUARY 2021
– WORLD CANCER
DAY**

GIVING IN CELEBRATION

As an alternative to wedding favours, why not honour a loved one, or make a gift to other families on your big day, by funding research that changes lives.

Shirley McCausland Drury made a wonderful donation to ovarian cancer research on her wedding day: “We decided to donate to Queen’s rather than have wedding favours, as the research they carry out is outstanding. One area in particular, ovarian cancer, is very close to our hearts. Every penny donated goes to research and it is such a fantastic charity, that I am very proud to support.”

We can provide you with personalised cards for your tables.

If you would like to support cancer research on your wedding day please contact:

Lotte Rietveld
Development Manager, Health on
028 9097 5233
or email L.Rietveld@qub.ac.uk.



Mr and Mrs McCausland

MEET THE TEAM

The Health Fundraising team is here to help you make a donation that is right for you, so that our researchers have the opportunity to test new ideas, and try new experiments that may lead to advancements for cancer patients in Northern Ireland and across the world.

If you would like to visit PGJCCR, meet a researcher, or need help planning your fundraising event, get in touch. The Queen’s Foundation is the registered charity of the University with 100 per cent of your donation going directly to the donor specified area.

If you are not already a donor to PGJCCR and would like to find out more, please contact any member of the Health Fundraising team below:

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Sarah-Jayne Cassells, Teresa Sloan, Roisin Hughes and Lotte Rietveld

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You can personalise your JustGiving page with your mission, photographs and message to your supporters.

When your profile is complete, simply email it to your friends and family, where they can donate online and leave you messages of support. JustGiving sends donations straight to us here at The Queen’s University of Belfast Foundation and adds Gift Aid to every eligible donation.

Make it personal! If you want to specify a particular project, simply email Lorraine (l.rogers@qub.ac.uk) stating your name, page website address and the project you have chosen.

Once your page is set up, you can track your progress and see messages from your friends and family.

THE IMPACT OF YOUR GIFT

Your gift	£1,000	£5,000	£10,000	£25,000
Your impact				
	Provides valuable seed funding for high-risk pilot experiments, essential for testing new ideas and providing preliminary evidence that leads to grant funding.	Enables a medical student to undertake an intercalated research Master's during their medical degree; often the first step in inspiring students to become clinical academics.	Allows a postdoctoral researcher to travel to another lab for four months to broaden their knowledge, collaborate and ensure Queen's is at the forefront of global research.	Funds a lab-based student for one year as they work towards their PhD. This supports the next generation of cancer researchers in Northern Ireland.



Professor Joe O'Sullivan
 Professor of Radiation Oncology, Queen's University Belfast
 Consultant Oncologist, The Northern Ireland Cancer Centre,
 Belfast City Hospital

Registered Charity Number: NIC 102044

The Queen's University of Belfast Foundation is a registered charity which helps fund local research, staff, equipment and clinical research trials which change lives here in Northern Ireland.

Gifts in wills are a simple way you can support this vital work in the Patrick G Johnston Centre for Cancer Research at Queen's. This research is used to help improve outcomes and quality of life for patients in the Northern Ireland Cancer Centre at Belfast City Hospital.

We understand that the causes closest to your heart are often personal, which is why you can choose to give to the area of research that means the most to you.

When you choose to leave a charitable legacy, you become part of the solution.

You inspire the greatest minds and invest in world-class research.

You change lives.

Contact Susan Wilson Legacy Manager

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www.queensfoundation.com/legacygifts



**QUEEN'S
 UNIVERSITY
 BELFAST**

**QUEEN'S
 FOUNDATION**

over **9,400**

people are diagnosed with cancer in Northern Ireland, every year



10-year cancer survival rate has doubled since 1979



1 in 10

women will develop breast cancer in their lifetime



we're developing targeted therapies for the 1 in 5 patients diagnosed with triple negative breast cancer

24%

of all male cancers are prostate related



we're advancing treatment for the **20%** of these diagnosed with stage 4 cancer

**Patrick G Johnston
Centre for Cancer
Research
priority areas**

- overcoming drug resistance
- personalised treatments
- earlier, more sensitive diagnoses
- advancing radiotherapy



6,114

people living with a form of blood cancer in NI

we are **1 of 13**

UK Trial Acceleration Programme centres running clinical trials



18%

of cancers in NI are gastrointestinal

11,000

gastrointestinal diagnoses in the last 25 years



@QubPGJCCR