

CCRCB OPEN DAY



Saturday 22 October saw the second annual CCRCB Open Day where we welcomed over 300 visitors of all ages into the building for a unique opportunity to find out more about the research happening here in Belfast.

Attendees included patients and families, supporters of the charities who fund research at CCRCB and the general public.

There was a wide range of activities taking place throughout the day, including tours across the five labs with each focusing on a different activity. Senior Scientists presented talks on various topics including 'Killing Cancer Cells' and Personalised Medicine.

We had our Conversation Hubs running throughout the day where researchers sat and talked about their areas of research.

The basement seminar room housed our science activities for all ages where visitors could try out Virtual Reality, make their own cell, pair 'chromosome' socks or decorate their own lab coats to take away.

We had information stands for the Clinical Research Team and NI Cancer Research Consumer Forum, who were talking about clinical trials and how patients can input



into trial development. Population-based cancer researchers provided information on risk factors for cancer prevention and survival, and the Supportive Care & Survivorship Team talked about using exercise as medicine.

Representatives from the various charities who support research in CCRCB had information stands at the event, along with our industry partners, Almac Diagnostics and PathXL.

The CCRCB Engagement Committee, who organised the event, would like to thank everyone who participated and everyone who attended, and are already thinking of how to make an even better Open Day in 2017!



CRUK CENTRE LECTURE 2016



Professor Richard Kennedy (CCRCB), Professor Ruth Plummer and Professor David Waugh (Director, CCRCB)

This year's CRUK Centre Lecture took place on Thursday 13 October and was given by Professor Ruth Plummer from the Northern Institute for Cancer Research, Newcastle University. A capacity audience attended the lecture, entitled 'Taking cancer drugs into the clinic – pitfalls and eventual success.'

Ruth Plummer is Professor of Experimental Cancer Medicine at the Northern Institute for Cancer Research, Newcastle University and an honorary consultant medical oncologist in Newcastle Hospitals Foundation Trust. She is Director of the Sir Bobby Robson Cancer Trials Research Centre within the Northern Centre for Cancer Care, which is a dedicated clinical trials unit based within the regional cancer centre. She leads the Newcastle Experimental Cancer Medicine Centre and also the CRUK Newcastle Cancer Centre. She trained at Cambridge and Oxford before moving back home to Newcastle and settling with her family in the Tyne valley.

Her research interests are in the field of DNA repair and early phase clinical trials of novel agents or novel imaging targets. She developed the clinical pharmacodynamic assay used in the first-in-class PARP inhibitor trial in 2003, and has worked with many of the PARP inhibitors currently under clinical development.

Her pre-clinical research is focussed on targeting other elements of the DNA repair pathways, and taking such agents into clinical trials. This work is either based on the Sir Bobby Robson Cancer Trials Research Centre at the Northern Centre for Cancer Care or within the Clinical and Translational Research Group in the Northern Institute for Cancer Research which she leads.

Nationally, Professor Plummer sits on the Cancer Research UK New Agents Committee and Cancer Research UK Science Committee, the NCRI Melanoma CSG, ECMC Imaging group and also the NCRI CTRad executive group, cochairing the work stream developing novel radiotherapy combination trials.

NORTHERN IRELAND BIOBANK SHORTLISTED FOR UK BIOBANK OF THE YEAR 2016

The Northern Ireland Biobank (NIB) were one of six finalists who were shortlisted for the 2016 UK Biobank of the Year award. This award recognises Biobanks that have gone above and beyond in facilitating ground breaking research with nominations made by researchers who have benefited from their services. Finalists were shortlisted based on their contribution to the nominator's research, how the biobank made their research possible and other factors including access to samples, quality and service. Shortlisted candidates were presented at the UK Biobanking Showcase on 16 November 2016 in London where participants voted for the winner and the prize was awarded.

The NIB were nominated by Dr Helen Coleman and would like to extend their gratitude for her nomination and support.

NEW QUEEN'S PROGRAMME WITH UNIVERSITY OF TORONTO TO DEVELOP FUTURE LEADERS IN CANCER CARE FOR NORTHERN IRELAND

The Centre for Cancer Research and Cell Biology (CCRCB) at Queen's University Belfast recently announced the establishment of an innovative Clinical Doctoral Training Programme in Precision Cancer Medicine with the world renowned Princess Margaret Cancer Centre, University of Toronto, Canada. This programme will allow clinicians in training in Northern Ireland to develop specialist skills through a three year programme which will include a two year fellowship in Toronto followed by a year immersed in cancer research at the CCRCB at Queen's.

Speaking from Toronto at the launch of the programme, Professor Mark Lawler, Dean of Education for the Faculty of Medicine, Health and Life Sciences (FMHLS) at Queen's and the chief architect of the initiative said: "This is an extremely exciting initiative that will take the brightest of our trainees to a premier global cancer institution and infuse them with the skills and experience to become the future leaders in innovative cancer care delivery that Northern Ireland needs. It also shows our commitment to the words of Senator George Mitchell when he opened our Centre in 2007 and said that: "this Centre is forging new global partnerships to relieve the human suffering from cancer."

Professor David Waugh, Director of the CCRCB who was also in Toronto for the launch said: "I cannot over-emphasise the importance of this initiative. We are investing in our future, taking the best of our homegrown talent and providing them with a unique opportunity to learn from the very best."

Professor Lillian Siu, and Associate Professor Dr Philippe Bedard, Princess Margaret Cancer Centre and University of Toronto lead on this progrmame said: "We are very excited about this initiative. It gives us the opportunity to welcome high quality clinical trainees from Northern Ireland into our training programme, whilst also providing a mechanism to encourage research collaborations between our two institutions."

The initiative has significant funding from the Health and Social Care (HSC) Research and Development Division, Public Health Agency, Northern Ireland. Dr Janice Bailie,



Back Row L-R: Professor Chris Elliott, Pro Vice Chancellor, Faculty of Medicine, Health and Life Sciences (FMHLS) QUB; Professor Mark Lawler, Dean of Education, FMHLS, QUB and Centre for Cancer Research and Cell Biology

Front Row L-R: Professor Lillian Siu, Princess Margaret Cancer Centre and University of Toronto, Canada; Professor David Waugh, Director, CCRCB, QUB; Dr Ruth Carroll, Programme Director, Health and Social Care (HSC) Research and Development Division, Public Health Agency, Northern Ireland; Dr Janice Bailie, Assistant Director, HSC Research and Development Division, Public Health Agency, Northern Ireland



Queen's staff members Professor David Waugh (CCRCB Director), Professor Mark Lawler and Helen Surgenor (Head of Medical Fundraising) pictured with Queen's alumni in Toronto

Assistant Director of the HSC Research and Development Divison said: "We see this exciting new initiative as a significant capacity builder for Northern Ireland. It identifies future leaders and provides them with the experience to lead clinical cancer care in Northern Ireland in the future."

Professor Chris Elliott, Pro Vice Chancellor, Faculty of Medicine, Health and Life Sciences at Queen's said: "The launch of this initiative emphasises our commitment to providing the highest quality training for our PhD students, leveraging global partnerships to deliver premier graduates. This initiative provides the model for a series of doctoral training programmes we are developing across the Faculty to ensure the competitiveness of our graduates locally, nationally and globally."

While in Toronto Professor David Waugh and Professor Mark Lawler also met with a group of Queen's alumni to update them on the new initiative and to tell them about the work of CCRCB.

CCRCB ONCOLOGIST TO LEAD UK LUNG RADIOTHERAPY AND NOVEL AGENTS CONSORTIUM

Dr Gerry Hanna, Clinical Senior Lecturer from the Advanced Radiotherapy Group, has been appointed by the National Cancer Research Institute (NCRI) Clinical Translational Radiotherapy Research Working Group (CTRad) and Lung Cancer Clinical Studies Group as the Clinical Oncology Chief Investigator on a proposed platform Phase 1 study investigating the combination of novel mechanism based therapies with radiotherapy in the treatment of patients with stage 3 non-small cell lung cancer (NSCLC). Alongside Medical Oncology Chief Investigator Dr Alastair Greystoke (Northern Institute for Cancer Research, Newcastle University) Dr Hanna will lead a UK consortium which will develop and deliver the proposed platform study.

NCRI CTRad and the NCRI Lung CSG held a two-day consensus meeting in Glasgow in February 2016 to consider the optimal approach in the development of novel mechanism based therapies with radiotherapy combinations. Invited participants included UK clinical and medical oncologists, statisticians, methodologists and industry partners active in NSCLC research [1]. At the meeting it was agreed to establish two platform studies which will run in parallel. In patients with locally advanced NSCLC, a phase 1 study will test novel mechanism based therapies agents, such as DNA damage repair inhibitors, in combination with curative intent radiotherapy in patients with stage 3 NSCLC. In patients with metastatic disease, a phase 2 study



Dr Gerry Hanna

will investigate RT in combination with immunomodulating agents. Both platform studies will involve significant pre-clinical and translational components, will have Patient/Consumer involvement at the core of study development and seek to follow the recent NCRI CTRad Academia-Pharma Joint Working Group consensus for the clinical development of new drugradiotherapy combinations [2].

Dr Hanna hopes that this UK consortium establishing two platform studies of novel drug and radiotherapy combinations offers a unique opportunity to rapidly improve outcomes for patients with NSCLC in a collaborative fashion.



Clinical and Translational Radiotherapy Research Working Group

References:

1.) Harrow S, Hanna GG, Faivre-Finn C, et al. The Challenges Faced in Developing Novel Drug Radiation Combinations in Non-small Cell Lung Cancer. Clin Oncol (R Coll Radiol). 2016 Nov;28(11):720-725.

2.) Sharma RA, Plummer R, Stock JK, et al. NCRI CTRad Academia-Pharma Joint Working Group. Clinical development of new drug-radiotherapy combinations. Nat Rev Clin Oncol. 2016 Oct;13(10):627-42.

PRETTY MUDDY

On Saturday 3 September over 2000 women took part in Cancer Research UK's annual Pretty Muddy event in Ormeau Park in Belfast.

A group of researchers and Cancer Research UK's Research Engagement Manager went along to congratulate all the participants at the finish line after they had completed 5km of muddy obstacles.

Aidan Seeley (PhD student) from CCRCB provided the finish line commentary for all the participants and entertained everyone on the day.

Over £130k has been raised so far from this event for Cancer Research UK.



Caroline Coffey, Aidan Seeley, Caroline Crothers, Jamie Roberts, Hajrah Khawaja and Zsuzsanna Nemeth at the Pretty Muddy event

FIGHTING BOWEL CANCER WITH FITNESS

A Queen's University scientist is bringing a new clinical trial to the UK that could help patients with bowel cancer reduce the risk of their disease coming back after treatment. Dr Vicky Coyle, from the Centre for Cancer Research and Cell Biology, has been awarded £750,000 from Stand Up To Cancer, a joint fundraising campaign from Cancer Research UK and Channel 4. Launched in the UK in 2012, Stand Up To Cancer has already raised more than £25million to fund translational research, which takes developments made in the lab and transforms them into new tests and treatments for cancer patients.

Dr Coyle will lead the trial in the UK looking into whether taking part in a supervised physical activity programme could help decrease the risk of the disease coming back. The trial is part of a larger international study called the CHALLENGE trial. Developed by the Canadian Cancer Trials Group, the CHALLENGE trial is already underway in Canada, Australia, France, Israel, South Korea and the United States and hopes to enlist almost 1,000 patients worldwide.

Each year in the UK, around 41,900 people are diagnosed with bowel cancer – 1,200 of those are in Northern Ireland. For some of these people, their cancer will return. There is some evidence that patients who are physically active have a greater chance of surviving bowel cancer, a lower chance of their disease coming back after treatment and a better quality of life afterwards. But to date, no study has been big enough to prove this conclusively or to determine how much exercise patients would need to do to reduce the risk of their cancer coming back.

Dr Coyle and her team will recruit patients from hospitals around the UK, including the Northern Ireland Cancer Centre in Belfast, who have just finished their bowel cancer treatment and are currently not physically active. Some of the patients will take part in a three-year programme of physical activity that will be tailored to each patient. The exercise they do can be in any form, for example, purposeful walking, running or cycling.

Patients will initially take part in a sixmonth programme of supervised weekly exercise sessions. After that they will be monitored and encouraged to continue their exercise programme via regular phone calls with their trainer. The amount of physical activity they are doing will be measured using a device called an accelerometer to give the team a better idea of how much patients are exercising. The team will also look at how this type of exercise programme could become part of the standard treatment pathway for patients if the study is successful.

This research has the potential not only to improve patient outcomes in Northern Ireland and the UK but also on an international level, reinforcing Queen's University's position as a leader on world class research which will have a lasting impact around the globe.

Dr Coyle said: "The aim of this study is to look at using exercise as a possible treatment to stop bowel cancer coming back in patients who have already undergone treatment for the disease. What we will be trying to find is an amount or 'dose' of weekly exercise – like we do for drugs – that could do this. Our hope is that by defining an amount of physical activity that could help prevent bowel cancer returning and showing that patients can successfully increase their activity levels by taking part in a structured exercise programme, we can change treatment pathways and



Dr Vicky Coyle

improve outcomes for our patients with bowel cancer. And the great thing about investigating exercise as part of treatment is that there are very little in the way of side effects, and there are many wider health benefits."

Dr Coyle added: "None of the amazing progress we've made against cancer could have happened without clinical trials. From life-saving drugs like tamoxifen, to advances in surgery and radiotherapy that cure thousands of people every year, every new treatment, test and screening programme needs a trial to make it happen. My team and I are very excited about receiving this funding from Stand Up To Cancer, which we hope will make a real difference to the lives of people with bowel cancer."

CULTURE NIGHT

On 16 September 2016, five CCRCB researchers and a Clinical Research Nurse volunteered to do a bit of 'science busking' at Culture Night Belfast. As the event name suggests, this is an artsthemed evening, with over 85,000 people converging on Belfast city centre for a wide range of free events and activities.

This is the third year that CCRCB have been involved and this year we were based in Writers Square in the City. We offered a number of activities including making your own DNA Helix, genetic taste test and make your own clinical trial. All the activities were very popular and the researchers were then able to tell people about their research and the work that happens in the CCRCB. They engaged with over 800 people across all ages. This was a great result and brought information about cancer research in Belfast to an entirely new audience.



CCRCB researchers in Writers Square for Culture Night

MOVEMBER RETURNS TO CCRCB

Movember returned to the CCRCB, as staff and students actively participated in another year of moustache growing, fundraising and increasing awareness of men's health issues. In addition, there was a big focus on physical activity in an attempt to promote Movember's new initiative – MOVE – which was set up to encourage participants to exercise more over a 30 day period. The 2016 Movember campaign was incredibly successful overall with staff and students involved in several events.

The Movember Foundation started in 2003 when 30 men from Australia decided to bring back the moustache without raising a single penny. Since then, the movement has spread across 21 countries, raising £460 million that has been used to fund over 1200 men's health projects worldwide. The annual moustache growing event promotes discussion and awareness of men's mental health, testicular cancer and prostate cancer and supports worldwide charities tackling these issues. In the UK, the campaign funds programmes in partnership with Prostate Cancer UK.

In 2014, the CCRCB became a Movember Centre of Excellence in partnership with researchers and clinicians at the University of Manchester. The primary focus of this partnership is on recurrent prostate cancer, improving methods of detection and personalised treatment. Additionally,



Professor Karen McCloskey's group model their Movember moustaches

research into refining and improving radiotherapy is being conducted with the aim of preventing recurrence.

This year in the CCRCB, events included a spinathon outside the Cancer Centre and a moustache-themed bake sale. We were also treated to a one man show by Professor Mark Lawler, Dean of Education for the Faculty of Medicine, Health and Life Sciences at Queen's, who masqueraded as some of the characters of James Joyce's short stories and novels. All in all it was another great year of fundraising for Movember, with vital funds raised to help improve men's health.

LLNI FUNDING FROM CASH FOR KIDS NI

Leukaemia and Lymphoma NI (LLNI) were fortunate enough to receive some very generous funding from Cash for Kids NI following a very successful fundraising effort from Ulster Bank's 'One Week in June Campaign'. Over £170,000 was raised throughout branches in Northern Ireland, and this huge sum was donated to Cash for Kids who then issued grants to local charities with the aim of improving the lives for children and families experiencing cancer. Leukaemia & Lymphoma NI received £18,725, and the grant will be used to further their research into the effects of drugs on the two main types of leukaemia cells, and to develop new therapies for childhood leukaemia. In addition to this, it will also provide a multimodal plate reader to analyse the effects of drugs on both normal and leukaemia cells.



Dr Kyle Matchett (CCRCB, second left) and Joanne Badger (LLNI, centre) collect a donation from Cash for Kids/Ulster Bank

NOVEL RESEARCH AIMS TO TRANSFORM RADIOTHERAPY FOR PROSTATE CANCER

An innovative prostate hydrogel system is being used at Belfast City Hospital for the first time to support the radiotherapy study and improve outcomes for participants. The concept and planning for the study was developed within the Advanced Radiotherapy Group (ARG).

Belfast Health and Social Care Trust has become the first NHS site in the UK to use SpaceOAR hydrogel from Oncology Systems as part of a trust-sponsored clinical trial. The stereotactic prostate radiotherapy (SPORT) in high-risk localised prostate cancer trial, led by Dr Suneil Jain, Friends of the Cancer Centre's Honorary Consultant in Clinical Oncology and Senior Lecturer at Queen's University Belfast, is assessing a new way of delivering radiotherapy to men with prostate cancer. The technique, Stereotactic ablative body radiotherapy (SABR), allows clinicians to treat prostate cancer with high doses of radiation delivered with fewer treatments than usual.

"The SpaceOAR is expected to decrease side-effects experienced by men receiving radiotherapy during the trial," said Sharon Hynds, Lead Clinical Research Radiographer at Belfast City Hospital. "This innovative system works by placing a small amount of gel between the prostate and rectum, a prostate spacer, to increase the distance between them, thus reducing the radiation dose received by the rectum during treatment."

"The SpaceOAR System is composed of biodegradable material which can maintain the space between the rectum and prostate throughout the entire course of radiotherapy and is completely absorbed by the patient's body over time. It has been shown to be well tolerated and to



Back row (I-r): Jonathan McMillan, Clinical Sales Specialist at Oncology Systems; Dr Ciara Lyons, Locum Consultant Oncologist; Dr Darren Mitchell, Consultant Oncologist; Dr Ciaran Fairmichael, Research Fellow; and Dirk Seagers, Director International Sales at Augmenix

Front row (I-r): Pat Shiels, Urology Site Specialist Radiographer; Karen Crowther, R&D Radiographer; Dr Suneil Jain, Consultant Oncologist and Chief Investigator of SPORT trial; Jane Cousins, Clinical Research Radiographer; Oonagh Stewart, Clinical Research Radiographer; Sharon Hynds, Lead Clinical Research Radiographer; and Stacey Murray, Clinical Research Radiographer

improve quality of life for men receiving radiotherapy to the prostate."

The research is studying men with high-risked prostate cancer and treating them with five radiotherapy treatments as opposed to the standard 37-39. This allows clinicians to treat the prostate with a higher dose of radiation without increasing the risk of side effects. Fiducial markers (small metal seeds that are implanted directly into the prostate) are also being used as part of the study to allow radiotherapy to be targeted very precisely.

Thirty men with high-risk prostate cancer will be enrolled in the feasibility study and will be treated with hormone therapy and radiotherapy to the prostate and seminal vesicles. In addition, half of the men will receive a further dose of radiation to the

pelvis, and gold markers will be placed in the prostate beforehand, to allow precise targeting of the prostate during treatment. The trial is expected to be open for recruitment for approximately two years.

"Belfast City Hospital is the first UK site to test the SpaceOAR as part of a prostate cancer radiotherapy treatment plan," said Jonathan McMillan, Clinical Sales Specialist at Oncology Systems. "As the trial progresses, we hope to see positive results that ensure a comfortable patient experience post-treatment, as well reducing the likelihood of complications during treatment. If successful, the trial could see SpaceOAR become a standard practice of care within the NHS, which would improve outcomes for men diagnosed with high risk prostate cancer across the UK."

LLNI #Imstill **CAMPAIGN** LAUNCH

Culture night in Belfast on 16 September marked the official launch of the Leukaemia & Lymphoma NI #Imstill campaign. The exhibition featured the portraits of seven blood cancer survivors alongside two LLNI funded PhD students, Cliona Johnson and James Smith. The aim of the campaign was to illustrate the part that research had played in the survival of each person, some of whom have had cancer multiple times.



Professor Ken Mills at Belfast Culture night alongside a portrait of PhD students James Smith and Cliona Johnston

CRUK FUNDED RESEARCHERS HIGHLIGHT POTENTIAL FOR REDUCING HARMFUL CHEMOTHERAPY FOR BOWEL CANCER PATIENTS

S:CORT (Stratified Medicine in Colorectal Cancer: From Biology to Treatment Prediction) is a £5M MRC-CRUK funded programme which brings together the "Best of Britain" in bowel cancer research to work together to develop new tests and identify new therapeutic targets to improve outcomes in this common malignancy. S:CORT involves an innovative partnership between academia, industry, patients and patient advocacy and policy groups.

As part of a public engagement event entitled Delivering 21st Century Medicine for Bowel Cancer Patients, supported by CRUK in Belfast (29 June 2016), Professor Mark Lawler, Chair of Translational Cancer Genomics at the CRUK Centre for Cancer Research and Cell Biology at Queen's University Belfast (QUB) and QUB Lead for the S:CORT Consortium presented exciting new data that shows the potential benefit of a stratified medicine approach in this common disease. Work by Dr Philip Dunne, Senior Research Fellow in Professor Lawler's group has highlighted how the expression level of a particular gene (PDL-1) in a particular cell type can influence patient prognosis. This work has just been published in Cancer Immunology Research and highlighted as a feature article on the American Association for Cancer Research website.

The event was opened by Paula Bradley (MLA), newly elected chair of the Northern Ireland Parliament Health Committee. "It is a pleasure to come here to CCRCB and open this event. Showcasing what institutions like Queen's University do in research makes it clear to patients and the public the benefits that research brings to improving the health and well-being of the cancer patient." The evening featured talks from cancer survivor Tom McGrath, Chief Commissioner of the Charity Commission for Northern Ireland, Sara Banbridge, Cancer Research UK, Vicky Coyle, Consultant Oncologist and Clinical Senior Lecturer, Northern Ireland Cancer Centre and input from panel participants Gerry McElwee, Cancer Focus Northern Ireland and Ed Goodall, Northern Ireland Cancer Research Consumer Forum. The event was a huge success with nearly 100 attendees.

"There is a lot of excitement about precision medicine at the moment, with President Obama's Precision Medicine



Professor Mark Lawler (CCRCB), Paula Bradley (MLA), Chair Northern Ireland Parliament Health Committee and Dr Philip Dunne (CCRCB)

initiative in the US and the recently announced Precision Medicine Catapult in the UK. Delivering personalised medicine for the cancer patient is a key focus of the S:CORT Consortium," said Professor Tim Maughan, overall lead of the S:CORT Consortium.

"The work by Dr Dunne highlights how a precise understanding of the tumour biology in the patient can allow us not only to select which patients may benefit from a particular targeted therapeutic approach, but also to spare patients from the potentially harmful side effects of chemotherapy," said Professor Lawler.

"While we need new treatments in our fight against cancer, the quality of life that we experience both during and post treatment is also very important. Having a precise way to decide whether a certain treatment will work well or cause harm is vital for us, the patients," said Dr Ed Goodall, colorectal cancer survivor and member of the Northern Ireland Cancer Research Consumer Forum. "Increasing our understanding of bowel cancer through research is vital in a disease which kills over 16,000 UK citizens each year. We are delighted to be part of this innovative partnership to develop new approaches in bowel cancer", said Deborah Alsina, CEO Bowel Cancer UK.

Professor Paul Harkin, President and Managing Director of Almac Diagnostics commented: "Almac are delighted to be involved with the S:CORT precision medicine initiative. We are fully committed to the advancement of personalised medicine and are currently developing a number of predictive and prognostic diagnostic tests with utility for colon cancer patients."

The S:CORT Consortium highlights how collaboration between all stakeholders - patients, researchers, healthcare professionals, industry, research charities and policy organisations can be so effective and deliver high quality science that can have patient benefit.

PRIZES AND MEASURES OF ESTEEM

Congratulations to **Professor Patrick Morrison** who has been elected President of the Ulster Medical Society for 2016-2017.

Dr Gerry Hanna Clinical Senior Lecturer from the Advanced Radiotherapy Group has been appointed by the National Cancer Research Institute (NCRI) Clinical Translational Radiotherapy Research Working Group (CTRad) and Lung Cancer Clinical Studies Group as the Clinical Oncology Chief Investigator on a proposed platform Phase 1 study investigating the combination of novel mechanism based therapies with radiotherapy in the treatment of patients with stage 3 non-small cell lung cancer (NSCLC). Alongside Medical Oncology Chief Investigator Dr Alastair Greystoke (Northern Institute for Cancer Research, Newcastle University) Dr Hanna will lead a UK consortium which will develop and deliver the proposed platform study.

Dr Lisa Crawford has received an ASH Abstract Achievement Award. This award is merit-based and awarded to trainees with high-scoring annual meeting abstracts. The paper entitled 'The E3 Ubiquitin Ligase HUWE1 Is a Potential Therapeutic Target for Multiple Myeloma' by Crawford, L.J. and Irvine, A.E. will be given as an oral presentation at the American Society for Hematology conference in San Diego in December.

BSc student **Mr Kevin Harkin**, who recently completed his BSc research project in Professor Karen McCloskey's lab, has been awarded the British Pharmacological Society's Undergraduate Prize 2016. Kevin will be presenting his project at the BPS Pharmacology Meeting in London (December, 2016). His presentation is entitled 'ATP-evoked P2X7 receptor modulates the activation of the pro-inflammatory cytokine IL-1 β in urothelial cells'.

VISION FOR PATHOLOGY

Professor Manuel Salto-Tellez delivered the lecture 'The future of histopathologists: Are we lost in translation?' at the Symposium 'Improving outcomes in patients with gastrointestinal malignancies – an international multidisciplinary approach', held at Maastricht University on 8 July 2016. At a time of important opportunities and challenges for academic pathology, Professor Salto-Tellez presented a vision for the pathology contribution to research and diagnostics, and for the teaching of future pathologists.

Other lectures given by Professor Salto-Tellez in recent months have included 'Future perspectives in Molecular Pathology – Changing Pathology Practice' at the Universitätsspital Basel (June 2016) and the keynote lecture on 'More than a decade of Molecular Diagnostic Cytopathology: How do we Practice it, how do we Teach it?' at the 40th European Congress of Cytology in Liverpool (October 2016).



Professor Manuel Salto-Tellez (centre) at the Symposium 'Improving outcomes in patients with gastrointestinal malignancies – an international multidisciplinary approach', held at Maastricht University

GREEN IMPACT

Green Impact is in its 10th year across the University but what does a scheme like this really achieve? Why bother?

It is estimated that half of plastic bottles used in Britain are never recycled. Optimistically, that means that half are recycled!

79% of waste generated on site at QUB is recycled or recovered and since 2008 Queen's has saved 6259 tonnes of carbon. Anything we can do to reduce our carbon footprint and its impact on the world around us is always worth the bother!

Last year 1035 colleagues, across the University got involved while the scheme provided 29 students with training and development opportunities in their role as auditors.

Spread across 2 buildings, this year's CCRCB Green Impact teams are still as engaged as ever! With some new volunteers joining in, we are working towards a silver award for the labs and general building. The Medicinal Chemists will endeavour to maintain their gold award status.

Together, the teams have a common interest in biodiversity enhancement this year but watch this space for details of our little schemes! We might bring some natural habitats to CCRCB and the surrounding area! Look out for our regular reminders and updates too, posted to CCRCB Staff Intranet:

- November will focus on recycling;
- December will look at ways to further reduce waste;
- January will review transport;
- February's topic will be energy.

The workbooks of evidence must be submitted by early March but it's never too late to join in so get involved at any stage if you like!

CCRCB Green Impact Teams 2016/2017

ALMAC DIAGNOSTICS AND CCRCB HIGHLIGHT POTENTIAL BENEFITS OF PERSONALISED CANCER MEDICINE IN INNOVATIVE PUBLIC ENGAGEMENT EVENT

In a novel public engagement event designed to showcase the potential benefits of personalised cancer medicine, Almac Diagnostics, the Northern Ireland molecular diagnostics company, opened its doors to cancer patients in Northern Ireland so that they could see "Science in Action" and how partnerships between industry and academia have the potential to benefit cancer patients. Almac Diagnostics are a partner along with Queen's University Belfast in S:CORT (Stratified Medicine in Colorectal Cancer: From Biology to Treatment Prediction), the innovative £5M research programme that seeks to develop new tests and therapies for colorectal (bowel) cancer, the second most common cancer in Northern Ireland which causes over 400 deaths each year.

Speaking at this special event, Jo-Anne Dobson, local Member of the Northern Ireland Assembly (Parliament) for Upper Bann and recently elected Chair of the All Party Group on Cancer said: "This is a really important event for cancer patients as it allows them to see first-hand how a local company with an international reputation is working to develop new tests that can make a difference in this deadly disease."

As part of the event, cancer patients got to go inside the laboratories at Almac Diagnostics and meet some of the scientists who are involved in this innovative work. "This was a really special event for patients," said Ed Goodall, colorectal (bowel) cancer survivor and member of the Northern Ireland Cancer Research Consumer Forum. "It allowed us to understand how science can be translated to new tests that may benefit patients," he added.

The event involved a collaboration between Almac Diagnostics, the Centre for Cancer Research and Cell Biology (CCRCB) at Queen's University Belfast (QUB) and the Northern Ireland Cancer Research Consumer Forum. "Bringing the public and patient advocacy groups into Almac Diagnostics to show what we do is an important part of our role in reaching out to the community", said Michael Sloan, Vice President for Business Development at Almac Diagnostics. It was our pleasure to host this event as part of our partnership with CCRCB and the S:CORT Consortium."



Professor Mark Lawler (CCRCB), Jo-Anne Dobson (Chair All Party Group on Cancer) and Mr Michael Sloan (VP for Business Development Almac Diagnostics)



Patients and patient advocates visiting the laboratories at Almac Diagnostics Craigavon

"It is important to highlight how real partnership between academia, industry and patient organisations can help drive innovative research that has the potential to impact positively on patient's lives," said Professor Mark Lawler, Chair of Translational Cancer Genomics, CCRCB, and QUB Lead for the S:CORT Consortium. "Working in silos does not help the patient," said Professor Lawler. "Yes, we need to compete – not against each other but against our common enemy – Cancer."

DONATIONS



The president of the **Ballynahinch Lions Club, Alan Simms**, held a coffee morning at his home and presented a cheque for $\pm 1,000$ towards cancer research to Alice O'Rawe (Fundraising Manager, Medicine). The donation was part of the proceeds from a 10k fun run organised by the Lions earlier in the year.



Carol Hutton produced and sold a simple guide to the wild flowers along the Causeway Coast, using her own photographs and aimed at children. They sold out and Carol raised £5,000 for bowel/liver cancer research, a cause dear to her heart. She attended the Centre for Cancer Research & Cell Biology Open Day and presented a cheque for £5,000 to Ruth Boyd from the NI Cancer Trials Network.

Pictured are: Alice O'Rawe, Carol Hutton and Ruth Boyd.



Congratulations to siblings **Katie Kirkpatrick (nee Martin)** and **Robbie Martin** who raised over £9,000 on JustGiving for pancreatic cancer research at CCRCB.

Katie and Robbie Martin ran The Great North Run on 11 September 2016 in memory of their father, John Martin.

Together, with their mother Sharon Martin and various friends and family, they have now raised over £20,000 to support the work of Professor Chris Scott.



Queen's Foundation have launched a new online fundraising guide for people who would like to raise money directly for CCRCB.

The simple guide provides tips on planning and promoting a fundraising event, using JustGiving and it includes poster/ flyer templates and a sponsorship form.

Check it out online at daro.qub.ac.uk/FundraisingGuide or contact Alice O'Rawe alice.orawe@qub.ac.uk

QUEEN'S PROFESSOR HIGHLIGHTS A ROUTE TO A HEALTHIER WORLD AT UNITED NATIONS IN NEW YORK

During the United Nations (UN) General Assembly, which took place in September 2016 at the UN Headquarters in New York, Professor Mark Lawler, Chair of Translational Cancer Medicine and Dean of Education of the Faculty of Medicine, Health and Life Sciences at Queen's University Belfast highlighted how precision and personalised health can help contribute to the development of a healthier world for the estimated 7.4 billion people who inhabit this planet. Speaking in the special European Alliance for Personalised Medicine (EAPM) session entitled "Science for Development," being held at the UN, Professor Lawler indicated the important role that science, innovation and education can play in improving outcomes in a killer disease such as cancer, which claims over 8 million lives worldwide each year, but emphasised the need for a global equality agenda to ensure that all citizens, not just those in the developed world, can benefit from patient informed, precision-based preventative or therapeutic interventions. "Discovery science, both at individual and population levels, has yielded significant insights into how common diseases such as cancer develop, and provides us with precision tools that can help prevent, predict or treat disease," said Professor Lawler. "But it is incumbent on us to ensure that personalised health is available to all, not just those who can afford to pay for it."

Denis Horgan, CEO of the EAPM, who are hosting the event at the UN said: "We are delighted to be highlighting the role that advances in personalised and precision



Denis Horgan (CEO European Alliance for Personalised Medicine), Marisa Papaluca (Senior Scientific Advisor, Human Medicines Research & Development Support Division, European Medicines Agency), Professor Mark Lawler and David Byrne (Former Ireland's EU Commissioner, Health & Consumer Protection)

medicine can play in combating disease. Hosting this event at the UN allows us to develop partnerships to help embed personalised and precision medicine at a global level."

"The recent award of a Precision Medicine Catapult (PMC) to Northern Ireland highlights how we are playing a substantial role in this important area," said Professor David Waugh, Director of the Centre for Cancer Research and Cell Biology at Queen's and PMC lead for Northern Ireland. "Personalised and precision medicine have the potential not only to deliver for our patients but also to contribute to the economic and social fabric of our society here in Northern Ireland." "Personalising health links to our Global Health strategy," said Professor Chris Elliot, Pro Vice Chancellor of the Faculty of Medicine, Health and Life Sciences at Queen's. "Innovative approaches in human, animal and plant health can all contribute to our global well-being. Highlighting this at the UN emphasises Queen's leadership role to a global audience."

Denis Horgan (EAPM) and Professor Mark Lawler (QUB) also announced that Belfast has been chosen as the venue for the EAPM Conference "Personalising Your Health: A Global Imperative" which will take place at the Waterfront in November 2017.

SCIENCE UNCOVERED NI

A new late-night event for the Ulster Museum showcasing the wonders of scientific activity in Northern Ireland took place on Friday 30 September 2016.

Three CCRCB researchers managed a stand where they conducted their own clinical trial with lemonade, had a smartphone microscope and genetic taste test for everyone to try out. Over 400 people visited the stand over the course of the night and we look forward to working with the Ulster Museum on future events.



CCRCB researchers at the Science NI Uncovered event



MLAS VISIT CCRCB

Cancer Research UK has begun a programme to invite MLAs to the CCRCB for a discussion of policy priorities and a tour of the labs. So far, three MLAs have taken up the invitation to visit and spent several hours in the CCRCB hearing about current work in bowel cancer and molecular pathology.

Valuable discussions took place around Cancer Research UK's key policy issues including the need for a comprehensive cancer strategy for NI, improved organization of diagnostic services including direct GP access to tests, and increased focus on prevention.

Discussions with MLAs also centred on the contribution of research not only to the cancer patient journey, but also to the Northern Ireland economy, and the importance of partnerships between academia, charities and industry.

MLAs Carla Lockhart (DUP Upper Bann), Claire Hanna (SDLP South Belfast) and Gordon Lyons (DUP East Antrim) have visited so far, and there are additional tours planned for December, February and April. All attendees found the visit very informative and interesting, shared their positive experience on social media and have been more involved in cancer issues within the Assembly since their visit.



Claire Hanna (MLA SDLP South Belfast) and Gordon Lyons (MLA DUP East Antrim) with Abdullah Alvi



Zsuzsanna Nemeth, Carla Lockhart (MLA DUP Upper Bann) and Kirsty McLaughlin

RECENT GRANTS AWARDED

Investigator(s)	Sponsor	Title	Amount	Start Date	End Date
Coyle, Vicky	CRUK (supported by Stand Up to Cancer)	Colon Health And LifeLong Exercise chaNGE trial (CHALLENGE UK)	£319,667	01/10/16	30/06/24
McMullin, Mary Frances	Bloodwise	Trials Acceleration Programme	£128,244	01/01/17	31/12/19
Mills, Ken McMullin, Mary Frances	Leukaemia and Lymphoma NI	Clinical Trials Nurse	£103,024	03/10/16	02/10/19

PHOTO GALLERY



Dr Chris Armstrong recently gave a presentation at a Prostate Cancer UK researchers' event in London.



Pictured are Nuffield placement student Lesley-Anne Downey and Sophie Robinson (UK Programme Manager for Research Placements at The Nuffield Foundation). Lesley Anne, from Markethill, was hosted by Professor Ken Mills' group during her placement in CCRCB. Lesley Anne has had treatment for a CNS lymphoma and undertook a project investigating the potential use of antiinflammatories in acute leukaemia.



CCRCB Research fellow Dr Caroline Coffey raised almost £500 for CRUK by walking an extra 10,000 steps every day in the month of September. Well done Caroline!



Dr Gerry Hanna and Victoria Dunne (PhD student) are pictured with their summer research student, Henry Quin, at the poster presentations for CCRCB summer students held in August 2016.

RECENT PUBLICATIONS

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NEW APPOINTMENTS

Welcome to the following new staff recently appointed to the Centre:

Research Staff:

Mr Matthew Alderdice Dr Vipin Babu Dr Eliana Barros Dr Neville Cobbe Ms Scarlett Dvorkin Ms Jennifer Fox Dr Ana Gonzalez Sanchez Mr Chris McCann Mr Alex McIntyre Mr Alexey Stupnikov Ms Jekaterina Vohhodina

Clinical Research Fellows: Dr Laura Feeney

Technical Staff: Ms Amanda Ross

Clinical Academic Training Programme: Dr James Beirne Dr Eileen Parkes

Visiting Researchers:

Dr Aziemah Ali Ms Nicola Cosgrove Mr Ben Doherty Dr Heba Emam

EVENTS

IACR 2017 Conference

22-24 February 2017 Newpark Hotel Kilkenny For further information and registration please refer to: http://www.iacr.ie/

AACR 2017 Annual Meeting

1-5 April 2017 Walter E Washington Convention Center Washington DC For further information and registration please refer to: http://www.aacr.org

Association of Breast Surgery AGM 15-16 May 2017 Waterfront Hall, Belfast For further information and registration please refer to:

http://www.associationofbreastsurgery.org.uk/abs-events/abs-conference/

UK and Ireland Prostate Cancer Brachytherapy Annual Meeting 19-20 May 2017 Venue TBC For further information and registration please refer to:

https://www.prostatebrachytherapy.org.uk/

ASCO 2017 Annual Meeting

2-6 June 2017 McCormick Place Chicago, Illinois For further information and registration please refer to: https://am.asco.org/

10th Joint Meeting of the BDIAP and the Pathological Society 20-23 June 2017 Waterfront Hall, Belfast For further information and registration please refer to: http://www.pathsoc.org/

UK SABR/BIR Conference on Stereotactic Radiotherapy 16-17 November 2017 Waterfront Hall, Belfast For further information and registration please refer to: http://www.sabr.org.uk/

European Alliance for Personalised Medicine Congress: 'Personalising Your Health: A Global Imperative' 27-30 November 2017 Waterfront Hall, Belfast For further information and registration please refer to: http://www.euapm.eu/

Comments on the CCRCB Bulletin or suggestions for future editions should be forwarded to **katie.stewart@qub.ac.uk**



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