



Queen's University Belfast Social Charter Newsletter

July 2021. VOL 28

World-first clinical trial shows improved survival for prostate cancer which has spread to bones

A world-first clinical trial led by Queen's University has shown how a new combination of radiotherapies has improved the treatment of very advanced prostate cancer in men.

It has demonstrated excellent tolerability in patients in slowing the progression of prostate cancer which has spread to the bones, potentially improving overall survival.

This is the first time that this combination of therapies has been tested in a clinical trial and has been proven to be safe and tolerable in this population of men with advanced prostate cancer, which accounts for around 10 per cent of all prostate cancer patients at diagnosis.

Men with advanced prostate cancer are normally treated with hormone therapy, which aims to shrink a tumour by limiting the amount of testosterone reaching the cancer cells. This new approach was the first to combine two existing forms of radiotherapy - Radium 223, an intravenous, bone-seeking radioactive drug which targets the prostate cancer in the bones, and Volumetric Modulated Arc Therapy (VMAT) (very high-tech Radiotherapy) to target prostate cancer cells in the prostate gland and pelvic lymph nodes.

Prostate cancer is the most common cancer in men in the UK. More than 47,500 men are diagnosed with prostate cancer every year – 129 men every day. In Northern Ireland, approximately 276 men die from the disease every year.

"I have seen my two daughters get married and have been able to spend quality time with my grandchildren. To put my faith in the hands of Professor O'Sullivan and his team was the only way forward for me. There's no doubt that without this vital research, I wouldn't have had the extended life beyond what was originally diagnosed."

David Livingstone, a patient who took part in the clinical trial

Research with Impact:

First-ever manufacturing cyber-seed to be created by researchers

The first-ever manufacturing 'cyber seed' which grows just like a plant and produces innovative designs for products ranging from aircraft parts to medical devices has been conceptualised by researchers – and now it is being brought to life.

The cyber seed will allow scientists to generate new products – bespoke to end users and suited to the local environment with the materials available - at the tap of a button from anywhere in the world.

A team of experts from Queen's University, Loughborough University and the University of York have been awarded £7.3 million by EPSRC - which is part of UK Research and Innovation - for the 'RIED' (Re-Imagining Engineering Design) project.

"This new research could really transform how design and manufacturing organisations work, making manufacturing more accessible to many sectors, efficient and distributed"

Project lead Professor Mark Price, School of Mechanical and Aerospace Engineering, Queen's University

Queen's University experts help deliver research for £40m Advanced Research and Engineering Centre

Queen's University and Ulster University are bringing together world class experts to deliver help deliver a research and engineering programme for the new £40million Advanced Research and Engineering Centre (ARC) in Northern Ireland.

Economy Minister, Paul Frew has announced that one of the world's largest professional services firms, PwC, is investing in the new centre, which will create 771 new technology and operational jobs over the next five years. The new centre is part of PwC's fastest-growing division, Operate, which is based in Belfast.

Through the project, Queen's University and Ulster University will develop joint research teams with an additional 38 roles.



Education with Social Purpose: 'Alleyway Action Day'

Thanks to all the Queen's University Handy Helpers volunteers who took part in the 'Alleyway Action Day' on 11 June 2021 on Rugby Road.

The Action Day, which saw a tidy up, planting and painting was made possible through support from local community volunteers, Handy Helpers, Queen's Students' Union, Queen's Annual Fund and Queen's Public Engagement.



Civic Culture and Intercultural Dialogue: Polling shows public want better rights protections following Covid-19 pandemic

New public polling commissioned in collaboration by Queen's University, Ulster University, and the Human Rights Consortium has found significant cross-community support for the inclusion of a range of rights in a Bill of Rights for Northern Ireland.

The polling provides evidence that societal factors such as Brexit, conversations concerning the future of Northern Ireland and the unprecedented challenges of the pandemic have increased support for a Bill of Rights with more than four in five (83%) feeling that following the Covid-19 pandemic, the right to an adequate standard of physical and mental health should be protected in law through a Bill of Rights.

Nearly four in five (78%) believe that it is important that there should be a mechanism in place to ensure that any rights contained in the Bill of Rights should be enforceable by law, and given the wider context and contributing factors of the current political climate, around a third feel that their experiences of Brexit (33%), the Covid-19 pandemic (34%) and conversations concerning a border poll and the future of Northern Ireland (36%) have increased their belief that their rights would be better protected through a specific Bill of Rights for Northern Ireland.

Breaking Boundaries to Produce New Knowledge: Precision Medicine Centre partners with Sonrai Analytics to deliver tool in cancer diagnostics

Precision Medicine Centre (PMC) at Queen's will partner with Sonrai Analytics in a programme to deliver a transformational tool in cancer diagnostics.

Belfast-based AI company Sonrai Analytics will lead an Artificial Intelligence in Health and Care Award to deliver novel AI cancer screenings across the NHS. The AI screening method will mean more accurate testing and faster results for patients and could potentially save millions for the NHS each year.

Sonrai Analytics is the only lead representative from NI to secure part of the UK-wide grant, subject to contract. The AI Award is making £140 million available over four years to accelerate the testing and evaluation of artificial intelligence technologies which meet the aims set out in the NHS Long Term Plan.

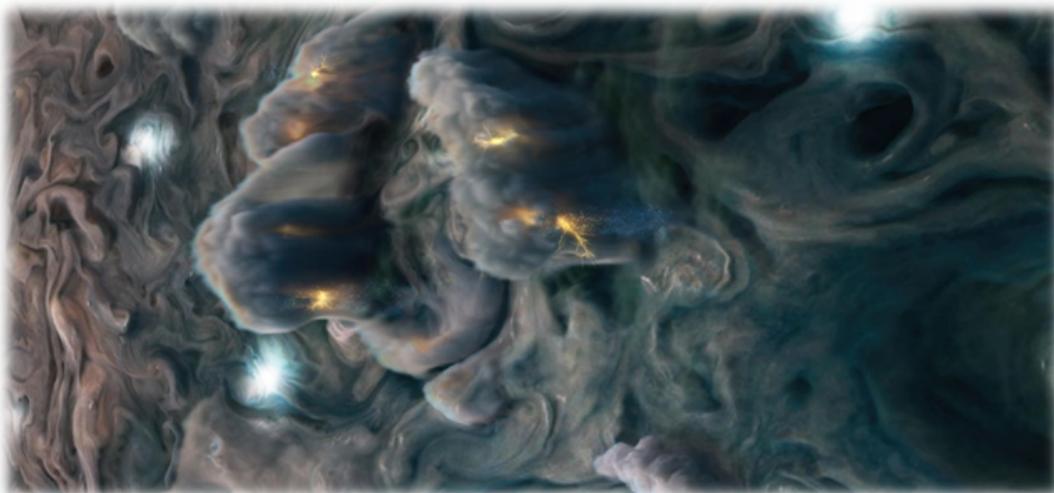
Life could exist in the clouds of Jupiter but not Venus

Jupiter's clouds have water conditions that would allow Earth-like life to exist, but this isn't possible in Venus' clouds, according to the groundbreaking finding of new research led by a Queen's University scientist.

For some decades, space exploration missions have looked for evidence of life beyond Earth where we know that large bodies of water, such as lakes or oceans, exist or have previously existed. However, the new research shows that it isn't the quantity of water that matters for making life viable, but the effective concentration of water molecules - known as 'water activity'.

The new study also found that research published by an independent team of scientists last year, claiming that the phosphine gas in Venus' atmosphere indicates possible life in the sulphuric acid clouds of Venus, is not plausible.

The team of international collaborators devised a method to determine the water activity of atmospheres of a planet and found that the water activity was more than a hundred times below the lower limit at which life can exist on Earth.



Sustainability: **Climate Change Animation Project**

The Northern Ireland Human Rights Commission and Queen's University Belfast have worked together to deliver a participative animation project on climate change and human rights.

Researched and led by Broadcast MA students at Queen's; coordinated by lecturer Don Duncan; and animated by Enter Yes, a local, award-winning Animation and Visual Effects studio, two animated films explore climate change from a youth perspective, through a human rights lens.

To view, click on the image below.

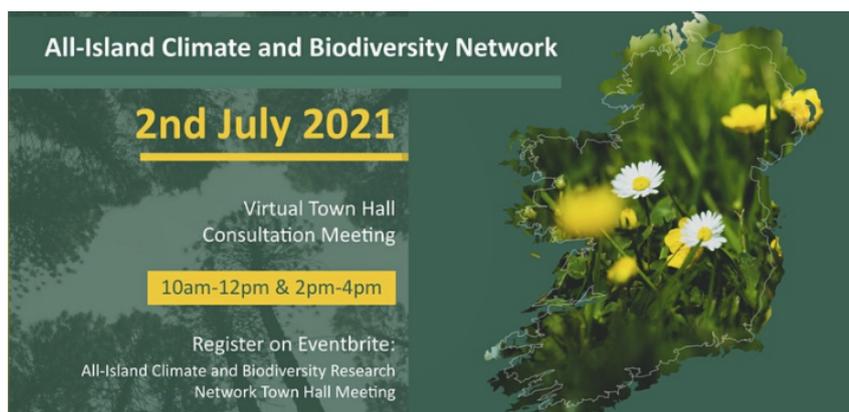


All-Island Climate and Biodiversity Network Virtual Town Hall

The All-Island Climate and Biodiversity Research Network (AICBRN) is a researcher-led initiative that began in 2020. It aims to work together across the island of Ireland to undertake the research necessary to address the climate and biodiversity emergencies. Queen's University is playing an active part in the Network.

The AICBRN Virtual Town Hall and Consultation Meeting will take place on **Friday, 2 July 2021 10am - 12pm & 2pm - 4pm.**

For more information, and to register, click on the image below.



Equality and Excellence: Somnyama Ngonyama

The Naughton Gallery at Queen's University has partnered with Belfast Photo Festival to present *Somnyama Ngonyama*, the first solo exhibition of renowned South African photographer Zanele Muholi on the island of Ireland.

Describing themselves as a visual activist, from the early 2000s, Muholi has documented and celebrated the lives of South Africa's Black lesbian, gay, trans, queer and intersex communities. In their series, *Somnyama Ngonyama* (meaning 'Hail, the Dark Lioness'), they turn the camera on themselves.

The Naughton Gallery overlooks the famous Queen's University quad, which has become an outdoor gallery featuring these incredible large-scale photographs, part of Belfast Photo Festival.

The exhibition runs between **03.06.21 - 08.08.21**.

For more information, click on the image below.



Recognising and Rewarding Contributions from Staff and Students: Inaugural Graduating Class from new Zero Carbon Engineering Course

The School of Chemistry and Chemical Engineering at Queen's University has marked the successful first completion of its new Postgraduate Certificate in Zero Carbon Engineering, with a tree planting ceremony and social event with its graduating class.

The postgraduate certificate, which focuses on a range of key areas within zero carbon and applied renewable energy, was delivered to more than 30 students, in partnership with the Department for the Economy, who have supplied funding for the programme.

"I'm delighted to celebrate with our first graduating class who have taken on the PGCert in Zero Carbon Engineering – these graduates are now equipped with the latest knowledge and skills which are critical in helping us to achieve local, national, and international net zero carbon targets, and as such, will now be exceptionally employable across a range of sectors. The planting of this pear tree within the grounds of the David Keir Building here at Queen's will allow us to ensure that we always remember these trailblazing students, and allows them to leave their mark on the Queen's campus – we hope to have many more students follow in their footsteps, and contribute to the zero carbon agenda."

Professor David Rooney, Director for the PGCert in Zero Carbon Engineering, Queen's University Belfast

Congratulations Class of 2021!

Congratulations to all our students who are graduating in the coming weeks. We really hope you all enjoy your virtual ceremonies and we can't wait to celebrate with you together when we can!

Even though the in-person ceremony isn't happening just yet, students can still borrow a University Gown for photos.

This year Queen's has waived the standard £25 gown hire fee, instead encouraging a £5 donation to QUB RAG (Raise and Give). So as well as getting the perfect snap, you'll be supporting elected charities Save the Children NI and Belfast Samaritans!

We look forward to sharing some heroic graduation stories in the coming weeks!



QUB RAG