



OVARIAN

LIVER

LUNG

STOMACH

BRAIN


OESOPHAGEAL

PANCREATIC

ANNUAL REPORT

2022



A photograph of a middle-aged Black man with a warm smile, sitting at a table. His hands are clasped together in front of him. In the foreground, a round birthday cake with white frosting and colorful candles is on a white pedestal. The candles spell out 'HAPPY BIRTHDAY'. The background is dark and out of focus.

Chrys Ngwa
Prostate Cancer Survivor

MAKING MORE

BIRTHDAYS

WEDDINGS

MEMORIES

CONTENTS

INTRODUCTION

CHAIRPERSON'S REPORT	2
CHIEF EXECUTIVE'S REPORT	4
2022 IN NUMBERS	5
A DECADE OF DISCOVERY	6

RESEARCH

NEW RESEARCH STRATEGY	10
BREAKTHROUGH 5 FOR THE FIGHT FELLOWSHIP	12
CLINICAL CANCER RESEARCH FELLOWSHIP	13
PUBLIC PATIENT INVOLVEMENT IN OUR RESEARCH	14
MUSGRAVE CANCER RESEARCH SCHOLARSHIP	16
BREAKTHROUGH PHD SCHOLARSHIP	16
2022 SUMMER SCHOLARS	17
LEVERAGING YOUR SUPPORT AND OUR RESEARCH	18

FUNDRAISING

HOW BREAKTHROUGH WAS SUPPORTED IN 2022	23
A SNAPSHOT OF OUR FUNDRAISING ACTIVITIES	24

FINANCE

GOVERNANCE	33
FINANCIAL REPORT	34
STATEMENT OF FINANCIAL ACTIVITIES	35
BALANCE SHEET	36
AUDIT COMMENTARY	37

APPENDICES

COMMITTEES AND BOARDS	39
CONFERENCES AND SPEAKING ENGAGEMENTS	39
PUBLICATIONS	40
POSTER PRESENTATIONS	42
PRIZES	44

MESSAGE FROM OUR CHAIR



2022 was another breakthrough year for everyone involved with and supporting Breakthrough Cancer Research. We are both delighted and proud to be fulfilling our ambitions – funding world-class research into poor prognosis cancers and bringing scientists and clinicians together to fast-track lab discoveries to develop and enhance treatments and hope for people with cancer.

After substantial progress in fundraising and by association the research we have been able to fund over the last few years, we have concentrated our focus on research into select poor prognosis cancers. Cancer research and patient outcomes change over time – to ensure we were true to our core beliefs, which involve offering hope for those with few options – we undertook a review of our research funding strategy. During 2022, with inputs from our Public Patient Involvement Panel and our International Scientific Advisory Committee, we produced our new 5-year Research Funding Strategy (which is available to view on our website). Our Research Strategy provides a clear roadmap of our research ambitions and continues to reflect our core values.

The year also provided an opportunity for the Breakthrough team to develop sustainable fundraising strategies and outcomes. While seeking to grow our fundraising commitments, we need to do so in a way that we can maintain. Our progress over the last number of years has placed a particular emphasis on the need for this type of support. I am delighted to highlight not only the ongoing nature of our sustainable levels of fundraising, but also the foundational nature of which it underpins. This itself allows us to take a more ambitious and multi-year view – a true sign of Breakthrough's maturity and wide support base.

The support we receive is undoubtedly only made possible by the unwavering commitment demonstrated by our corporate, community, event, and individual donors. It is crucial to acknowledge the profound impact of our support network, including the heightened awareness among donors and the general public.

The Breakthrough team is widely recognized as leaders in patient-centered research for poor prognosis cancers in Ireland and we are witnessing a growing number of supporters spanning the entire country.

I would like to thank all our supporters – our Public Patient Involvement Panel, volunteers, researchers, clinicians and donors. We would not be making the impact we are without you.

To Orla (our CEO) and all our dedicated staff (Ann, Eoghan, Frances, Julian, Linda, Liz, Mary and Nora), our thanks for all your efforts. Finally, my thanks to the Board – thank you for your support.

Michael P. McMahon

Michael P. McMahon



A photograph of a woman with blonde hair and two young children laughing together outdoors. The woman is on the right, wearing a dark green jacket over a floral shirt. The child on the left is wearing a blue jacket and a dark blue beanie with a red stripe. The child in the middle is wearing a blue jacket and a light blue beanie. They are all laughing heartily, with their eyes closed and mouths open. The background is a blurred green, suggesting a park or forest.

**MAKING MORE
LAUGHTER
MISCHIEF
MOMENTS**

Amie Ó Bric
Bowel Cancer Survivor



MESSAGE FROM OUR CEO

Each year, Breakthrough Cancer Research strives to meet our mission, to make more survivors of cancer through research, and 2022 was no exception. In fundraising and research we made huge strides by investing in research which will positively impact the treatment and care of people with cancer. Our income exceeded €2 million for the second year since our inception and we invested €1.5 million directly into research, leveraging €800,000 more for projects that aligned with our research priorities. Many of these innovative projects are outlined in the research section of this report.

But 2022 was a particularly special year for us, as we celebrated ten years of Breakthrough Cancer Research and used this moment to look back on what had been achieved in that time, and to also challenge ourselves to deliver even more in the coming decade. This culminated in the launch of our new 5-year Research Strategy 2022-2027 (Making More Survivors) in September. We are so proud of our growth and impact to date, through 'a decade of discovery', and a small snapshot of our milestones can be seen on page 6.

Research funding was provided to fund researchers, consumables, infrastructure and equipment to improve cancer care and outcomes, with patient benefit as the core focus.

“

We are 100% funded by the generosity of the public and they amaze us every single day by the many different ways that they help to fund cancer research.

”

Throughout the year, Breakthrough provided support to the research community, new treatments for patients and evidence-based information and tools to the public and patients. Following the input of our International Scientific Advisory Committee, our Public Patient Involvement Panel and many other stakeholders, our new research strategy led to a narrowing and deepening our research focus and revision of our research priorities. Narrowing our focus to have greater impact meant targeting greater research investment to a specific group of seven

poor prognosis cancers, responsible for almost half of all cancer deaths in Ireland.

To lead out our new ambitious research strategy we launched our inaugural All-Ireland Cancer Network (AllCaN) grant programme. €1 million investment was awarded to an all-Ireland network programme focused on improving outcomes of people with Barrett's oesophagus and oesophageal cancer, to commence in 2023. 17 research grants were also awarded during the year – aligned with Breakthrough's updated priorities and spanning the research career pathway from summer scholarships to both clinical and research fellowships.

Significant investment was also made this year to build greater brand awareness and inspire support through greater understanding of the power and potential of cancer research. Successful campaigns were executed, including a new brand campaign called Every Breakthrough Brings Us Closer, and a new National Flag Day coinciding with World Cancer Research Day.

We are proud of our bold vision of 100% survival for 100% of cancers. But we also understand that to achieve it, we need an incredibly dedicated team and we are so fortunate to have it here. The people who are on our team are not only the patients, oncologists, surgeons, and the nurses who work with the researchers in the lab, but also the fundraisers who allow us to do what we do. We are 100% funded by their generosity and they amaze us every single day by the many different ways that they help to fund cancer research. We are immensely grateful for their unwavering support and dedication to our shared mission to make more survivors of cancer. Quite simply, we couldn't do it without all of you.

Thank you!

Orla Dolan

“
Our income exceeded €2 million for the second year since our inception and we invested €1.5 million directly into research,
”

2022 IN NUMBERS



€1.5

million invested
in research



160

funded researchers
at the bench



17

research grants
approved and started

10

year milestone as
Breakthrough Cancer
Research



20

counties marked World
Cancer Research Day



5

research awards -
both national &
international



5

summer
scholars



4

virtual challenges with
1,000s of participants
from across Ireland



32

journal publications
by Breakthrough
Cancer Researchers



817

people sponsored
a scientist

“

We endeavour to ensure that patients
have access to the best treatments for
cancer and never have to be told that
there is 'no hope'.

”





10 YEARS

breakthrough
CANCER RESEARCH

A TIMELINE OF OUR KEY MILESTONES TO DATE

OUR HISTORY

The story of Breakthrough Cancer Research goes all the way back to the mid-nineties when our founder, Professor Gerry O'Sullivan – spurred on by the unmet needs of his patients – set up a small research group in Cork's Mercy University Hospital. From these humble beginnings began a vision of patient-focused research that dealt with tackling poorer prognosis cancers.

2012



Breakthrough Cancer Research is officially launched as a national charity in the same year that our founder, Professor Gerry O'Sullivan sadly passes away from cancer, leaving behind an incredibly strong foundation on which great things are set to be built.

Researchers receive the 2013 Pfizer Innovation Through Teamwork award for their device to treat inoperable lung cancer.

2013



2014



A Breakthrough-supported clinical trial for inoperable colorectal cancers expands from Ireland into Denmark.

Breakthrough-funded researchers are the first in the world to show that the bacteria in your body can both positively and negatively affect cancer treatment.

2015



2016



A new clinical trial opens for Malignant Melanoma combining Electrochemotherapy and Immunotherapy.

A phase one oesophageal trial opens for the Endo-Ve device.

2017



2018



A new Cancer Immunology Fellowship is launched in partnership with Qualtrics and 5 For The Fight.

In 2012,
Breakthrough
was funding **12
RESEARCHERS** in
2 LABORATORIES.

Fast forward to the end of **2022**, when there are **160 BREAKTHROUGH RESEARCHERS** working in **13 INSTITUTIONS** on the island of Ireland and beyond.

We award our first Musgrave PhD Scholarship in Trinity College Dublin. This year also sees Roisin Connolly appointed to the Professor Gerald O'Sullivan Chair, to lead cancer research in the South - South West region.

2020

We support research investigating the potential of breath droplets to detect mutations in early-stage lung cancer.

2021

After a decade of investment in Cork's autophagy team, a phase 1 trial is opened for a new lithium-enhanced chemo treatment for drug resistant GI cancers.

2022



2019

We deliver a world first in 2020 with The Shop That Nearly Wasn't – a shop entirely stocked and staffed by survivors of cancer, featuring a showcase of talent that we would have lost if it weren't for research.

2020

Breakthrough -funded research shows how fractalkine pulls natural killer cells into belly fat, preventing them from reaching oesophageal tumours

2022

September of 2022 marks the launch of our new five-year research strategy, which involves narrowing our focus and targeting greater research investment to urgently improve prevention, detection and treatment in seven cancers that are causing almost 50 percent of cancer deaths in Ireland.

We have **INVESTED AND AWARDED OVER 14 MILLION EURO** and **LEVERAGED ANOTHER 5 MILLION EURO FOR RESEARCH** since our launch.

RESEARCH





OUR VISION:

**100% SURVIVAL FOR
100% OF CANCERS**

OUR MISSION:

**MAKE MORE
SURVIVORS OF
CANCER THROUGH
RESEARCH**

'MAKING MORE SURVIVORS': THE LAUNCH OF OUR NEW RESEARCH STRATEGY

In September of 2022, we launched 'Making More Survivors' – our new research strategy which sets out how, through research, we plan to significantly impact the survival rates of the poorest prognosis cancers over the next five years.

Each year in Ireland, seven cancers make up nearly one-third of all new cases and almost half of all cancer deaths; oesophageal, pancreatic, lung, ovarian, brain, liver and stomach.

Our focus on these cancers – which have the poorest prognosis – means we need to urgently have impact to remove the disparity in cancer survival rates between the so called 'good' cancers and 'bad' cancers.

We passionately believe in the power of research to transform cancer care and the patient experience, having already delivered new treatments with our 'find smart, fund fast' approach.

New diagnostics and better treatments are urgently needed. In response to this, our new five-year research strategy reflects our ambitious vision to strive for 100% survival for 100% of cancers through cutting-edge patient-focused translational research at every point of the cancer journey.

Our focus and specific research priorities have been informed by people with cancer and their families, our Scientific Advisory Committee, our Public Patient Involvement Panel, healthcare professionals, the broader research community and industry. This will be a collective effort as we work with stakeholders who already recognise our past successes and welcome our essential role in changing the future for the hardest to treat cancers, as well as forming new working relationships.

There is no denying that with this strategy, Breakthrough Cancer Research is taking on a momentous challenge; despite the fact that there hasn't been significant change in the survival of some cancers for decades, incidence of these cancers is also rising. However, we do not shy away





from this challenge. Instead, we have developed a strategy that builds on the best aspects of its predecessor, and in some ways, will narrow our focus for maximum effect.

Research and innovation is, by its very nature, continuously changing. As such, this strategy will respond and adapt to significant emerging findings in order to have an even greater impact. While it is a new strategy, what will not change is the focus of our efforts to make more survivors of cancer. We know that through continued research, people with cancer and their families get to have more birthdays, Christmases and memorable moments together. Breakthrough Cancer Research is part of making that happen.





NEW BREAKTHROUGH 5 FOR THE FIGHT FELLOWSHIP AWARDED

Currently, treatments for cancer of the food-pipe (oesophageal cancer), only work for 30% of people. Therefore, approximately 70% of people with oesophageal cancer will not benefit from chemo-radiotherapy and urgently need new treatments.

Dr. Melissa Conroy from Trinity College Dublin awarded the Breakthrough 5 for the Fight Fellowship.

Natural killer (NK) cells destroy cancer cells. However, Dr. Melissa Conroy's team have found that in people with oesophageal cancer who are obese, NK cells are pulled into the visceral fat by a protein called fractalkine. Once in the fat, NK cells are significantly altered and die before they can reach the tumour. In oesophageal tumours, the highest obesity levels are linked to the lowest numbers of NK cells. We know a drug called a CX3CR1 antagonist targets the action of fractalkine and can block fractalkine from pulling NK cells into the fat.

Having been awarded the new Breakthrough 5 for the Fight Fellowship, Dr. Melissa Conroy and her team of researchers will now test whether this drug can free NK cells from the fat so that they could move towards and kill oesophageal cancer cells. Through their research we'll also learn if NK cell therapies can be changed to bypass the fat and boost tumour destruction in oesophageal cancer.



Ultimately, we'll learn if two new immunotherapies can improve survival in oesophageal cancer.



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NEW RESEARCH TO IMPROVE THE SURVIVAL OF EARLY-STAGE BREAST CANCER

New research led by Breakthrough-funded investigators at Cancer Research @UCC aims to advance the personalisation of treatment for patients with early-stage breast cancer. This research will help prevent unnecessary toxic and ineffective therapies for some patients who would not benefit from the treatment, while it will help others receive a more intensive approach when needed.

This innovative research is being undertaken by Dr. Maeve Hennessy under the guidance of Professor Roisin Connolly, the Professor Gerald O'Sullivan Chair in Cancer Research @UCC and Consultant Medical Oncologist at Cork University Hospital (CUH). Dr. Hennessy was selected as the first recipient of this highly prestigious Clinical Cancer Research Fellowship, which is fully funded by Breakthrough Cancer Research.


Dr. Hennessy and her team, who are working in collaboration with the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins (USA), the Translational Breast Cancer Consortium, Cancer Trials Ireland and the Royal College of Surgeons in Ireland (RCSI), are developing tools which will maximise treatment efficacy while also minimising treatment-related side effects.

“

The research is highly relevant as it will ultimately help to improve cancer outcomes and survival for more than 3,500 women who are diagnosed with breast cancer in Ireland each year.

”



A photograph of two women, Therese Murphy Cahill and Lucy Fahy, in a craft room. Therese, on the left, is wearing a blue floral patterned top and holding a notebook. Lucy, on the right, is wearing a purple top, a teal cardigan, and a colorful patterned headscarf, holding a yellow pencil and a notebook. They are both smiling at the camera. In the background, there is a white shelving unit with various items, including a silver helmet. In the foreground, there are paint tubes, brushes, and other craft supplies on a table.

Therese Murphy Cahill and Lucy Fahy
Survivors and PPI Representatives

“

It's nothing about me,
without me. It's important
to ask people with cancer
what **THEY** need.

”

PPI ENGAGEMENT AND OUTREACH

All of our Breakthrough Cancer Research Public Patient Involvement (PPI) panel participants know what it's like to personally live, or care for someone, with cancer. These insights are extremely valuable for our researchers to hear directly from PPI participants. It helps them to understand the real lived experience of someone who has had cancer, which helps them to understand

cancer, its treatment and its effects better. This is why it is so important to have people with cancer and members of the public involved in everything we do.

Our PPI panel are embedded in our research, review our work and played a key role in the development of our new five-year research strategy.

The patient needs you to succeed because lives depend on it. Patients provide human context to decision makers and researchers.

Marion O'Mahony

CANCER CONVERSATIONS

In 2022, we began our Cancer Conversations series. People with a personal experience of cancer, either themselves or through a loved one, chatted with some of our amazing cancer researchers.

Series highlights included:

Dr. Melissa Conroy, Trinity St James's Cancer Institute, in conversation with Sean Dorgan about her research on obesity-associated oesophageal cancer and new immunotherapy treatments she is investigating to treat this cancer.

Dr. Sinéad Toomey, Royal College of Surgeons in Ireland, chatted with Debbie Whelan about the use of exhaled breath condensate to screen for lung cancer.

Dr. Antoinette Perry and Asia Jordan, University College Dublin, were in conversation with Deirdre O'Raw about improving the early detection of ovarian cancer.

THE MOST IMPORTANT VOICE

Noreen Daly, who lost her husband Teddy to pancreatic cancer, presented to approximately 300 delegates at the Irish Association of Cancer Research (IACR) Annual Conference 2022, at the Radisson Blu in Cork, during the Breakthrough Cancer Research sponsored session that focused on poor prognosis cancer research.



PPI IN THE LAB

Two of Breakthrough's PPI panel, Pamela Deasy and Mandy Quirke, joined PPI representatives from other charities in the Royal College of Surgeons in Ireland in November to evaluate their role in a lab setting, 'PPI review of the PPI in Lab-Based Research Module for PPI Contributors'. This was being developed by the PPI Ignite PPI Working Group, which includes Dr. Emma Dorris, Dr. Sarah Delaney, Dr. Isabelle Bray and our own Dr. Frances Drummond.



COMMUNICATION TRAINING

16 Breakthrough-funded researchers and 16 PPI representatives attended a virtual two-day workshop, hosted by Breakthrough, to train researchers in communicating to multiple audiences, including lay people and the media.

This workshop included presentations by; Marian O'Mahony - Patient Advocate and Author of the book Goodbye My Son, Kay McKeon - Patient Advocate and award-winning Designer, Niamh Murphy, Managing Director of ETC Agency and Roisin Kivlehan, ETC Client Manager.



MUSGRAVE CANCER RESEARCH SCHOLARSHIP



This year the successful Musgrave PhD Scholar, in association with Breakthrough, is David Hackett, who will work with supervisor, Dr. Stephen Maher in Trinity College Dublin on pancreatic cancer.

His research question is "Can synthetic miR-31 mimics/anti-miRs be employed as a novel therapeutic for enhancing chemotherapy and radiotherapy sensitivity of pancreatic cancer?".

This proposal focuses on pancreatic cancer research, a poor prognosis cancer in Ireland and globally. Patients diagnosed with pancreatic adenocarcinoma (PDAC) have an extremely poor prognosis; the vast majority of patients will die within one year of diagnosis. PDAC has now surpassed breast cancer to become the third highest cause of cancer-related death and is projected to be the second most common cause of cancer-related death in the US by 2030; a trend mirrored in Europe. Less than 10% of those

diagnosed with pancreatic cancer will live for five years after their diagnosis.

As PDAC typically responds poorly to chemotherapy and radiotherapy, patients achieve only a modest overall survival period and often at a cost of significant side effects and a negative impact on quality of life. As such, there is a significant need to characterise mechanisms of resistance to chemotherapy and radiotherapy in PDAC, identify predictive biomarkers to guide choice of cytotoxic therapy, and develop new therapeutic approaches.

David's project will investigate a promising new RNA-based therapeutic strategy to improve the effectiveness of conventional chemotherapeutic and radiotherapy regimens, with the ultimate aim being to increase survival through improved treatment efficacy.

BREAKTHROUGH PHD SCHOLARSHIP

Daniella Anthea de Agrela Gomes, was awarded the Breakthrough PhD Scholarship 2022. She will work with supervisors Prof. Adriale Prina-Mello and Dr. Dania Movia at the Trinity Translational Medicine Institute, Trinity College Dublin and her project will focus on advancing lung cancer research. Lung cancer is a cancer of high unmet clinical need, according to the World Health Organisation (WHO).

Non-small-cell lung cancer (NSCLC), is one of the most common types of cancer in Ireland and is often diagnosed at advanced stages when the cancer has already begun to spread into other tissues. 70% of patients show poor or no response to therapy when lung cancer starts to spread.

Daniella's research will focus on the improvement of the current understanding of abnormal angiogenesis in lung cancer – a key contributor to the spreading of this type of cancer.

Angiogenesis is the process by which new blood vessels form, allowing the delivery of oxygen and nutrients to the body's tissues. While it is a vital function, required for growth and development as well as the healing of wounds, angiogenesis also plays an important role in the formation of cancer because, like any other body part, tumours need a blood supply to thrive and grow.

Daniella will investigate the role angiogenesis plays in chemoresistance, and how to therapeutically target it. Improving the understanding of the role of angiogenesis within lung cancer progression and the response to therapies will provide a real impact on the quality of life of people affected by lung cancer.





2022 SUMMER SCHOLARS

Five third level students, whose research was funded by the Breakthrough Cancer Research Summer Scholarship Programme, spent the summer researching increased understanding and possible new treatments for cancer patients in Ireland. Their research, across a range of cancers, aligns with our continuous endeavours to ensure that people have access to the best treatments for cancer and never have to be told that there is 'no hope.'



Nina Zumbrunn

Nina Zumbrunn from Dublin City University conducted a trial on the benefits of an exercise and nutrition programme for people with peritoneal and ovarian cancer who are scheduled for surgery.



Tim Cronin

Tim Cronin from University College Cork examined the role of expanded access chemotherapy programmes in a designated cancer centre at Cork University Hospital.



Jessica Walsh

Jessica Walsh of University College Cork researched the effects of particular molecules on Vitamin D receptors in oesophageal cancer (cancer of the food pipe).



Sarah Badar

Sarah Badar of the Royal College of Surgeons in Ireland (RCSI) conducted her research on Multiple Myeloma (MM) – a type of blood cancer that affects white blood cells which are important for our immune system.



Siobhán Lynam

Siobhán Lynam from the Royal College of Surgeons in Ireland performed a follow up study on the effect of a pre-and post-operative exercise programme on oesophageal and stomach cancer patients' physical fitness.

Now in its second year, the Summer Scholarship Programme is focused on patients, with the ultimate aim being to improve cancer care and increase survival rates. It is also vital for students to have these hands-on experiences in our cutting-edge research labs in Ireland.

LEVERAGING YOUR SUPPORT AND OUR RESEARCH

Breakthrough has successfully leveraged research funding, and will continue to do so through partnerships in co-funded schemes led by national and international organisations. In 2022, we secured new investment aligned to our research strategy through the following programmes:



HEALTH RESEARCH CHARITIES OF IRELAND-HEALTH RESEARCH BOARD (HRCI-HRB) JOINT FUNDING SCHEME 2022

Prof. Kathleen Bennett and Prof. Frances Horgan, Royal College of Surgeons in Ireland will explore the rehabilitation needs of people with brain tumours in Ireland - "Surgery, radiotherapy, chemotherapy, but now what?"



Prof. Kathleen Bennett



Prof. Frances Horgan



Dr. Ann Hopkins



Prof. Siobhan Glavey

Dr. Ann Hopkins and Prof. Siobhan Glavey, Royal College of Surgeons in Ireland will undertake research on Multiple Myeloma. In order to test potential new therapeutics, we need models of the specific disease for the laboratory. There are currently very few lab models for Multiple Myeloma, so this project aims to develop new specific experimental model which also incorporates patient tissue and use this new model to test promising new treatments.

IRC NEW FOUNDATIONS 2022

Dr. Marion Butler of Maynooth University received an IRC New Foundations Grant, awarded with Breakthrough Cancer Research as the partner. Her group will investigate the "Use of a Proteomic Strategy to Identify Novel Targets to Pursue in Ovarian Cancer".



IRISH RESEARCH COUNCIL ENTERPRISE PARTNERSHIP SCHEME 2022



Dr. Valentina Tanelotto

Dr. Valentina Tanelotto was awarded an IRC EPS Postdoctoral grant for her research on Uveal Melanoma, which is a cancer arising within the eye. Valentina, whose research title is "Accelerating the Route Towards Metastatic Uveal Melanoma Diagnosis and Treatment", will work in the lab of Prof. Breandán Kennedy in University College Dublin.



Maria Carey

Maria Carey, University College Cork, along with her supervisor Dr. Sharon McKenna, received a post-graduate IRC EPS award to research Oesophageal cancer. Maria's research aims to understand the role of gene function and how these can be used to combat drug resistance and make treatment more effective for people with Oesophageal cancer.



Aideen Scriney

Aideen Scriney of Dublin College University, with supervisor Dr. Lorraine Boran, received a postgraduate IRC EPS award to examine Cancer Related Cognitive Impairment (CRCI). This research will focus on targeting intervention at patients before treatment or surgery to prepare patients for the stress of treatment. In particular, it will focus on the impact of exercise prehabilitation on CRCI.

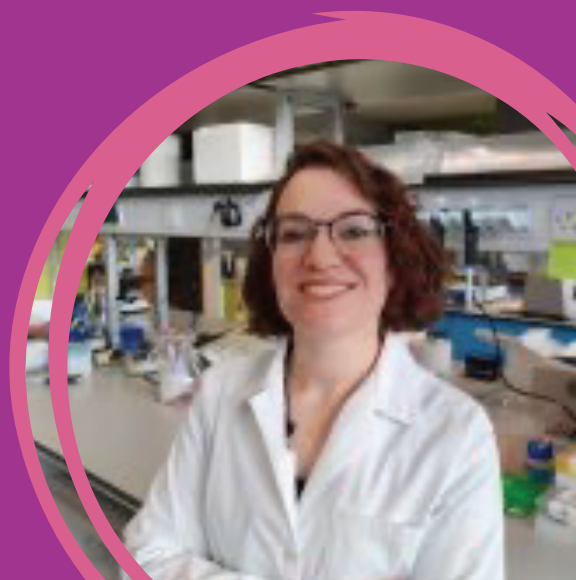


Avril Deegan

Avril Deegan of Dublin College University, along with supervisor Dr. Simon Dunne are investigating resilience, social support and quality of life amongst childhood Leukaemia survivors and their parents. This research is of particular interest to Avril who is a survivor herself, having been diagnosed with acute Lymphoblastic Leukaemia at the age of five.

MARIE SKŁODOWSKA-CURIE COFUND ACTION (MSCA) POST-DOCTORAL FELLOWSHIP

Dr. Aranzazu Martínez de Marañón Peris was awarded a Marie Skłodowska-Curie COFUND Action (MSCA) post-doctoral fellowship with DevelopMed and Breakthrough Cancer Research. Aranzazu joins an established team in Cork who have identified a process called Autophagy which allows cancers to become resistant to chemotherapy drugs. Aranzazu will specifically look at changes in proteins involved in this process to uncover potential new targets to treat oesophageal cancer.





OESOPHAGEAL

OESOPHAGEAL

PANCREATIC

PANCREATIC

LIVER

LIVER

LUNG

PANCREATIC

BRAIN

10



LUNG

BRAIN

OVARIAN

STOMACH

10 YEARS
breakthrough
CANCER RESEARCH

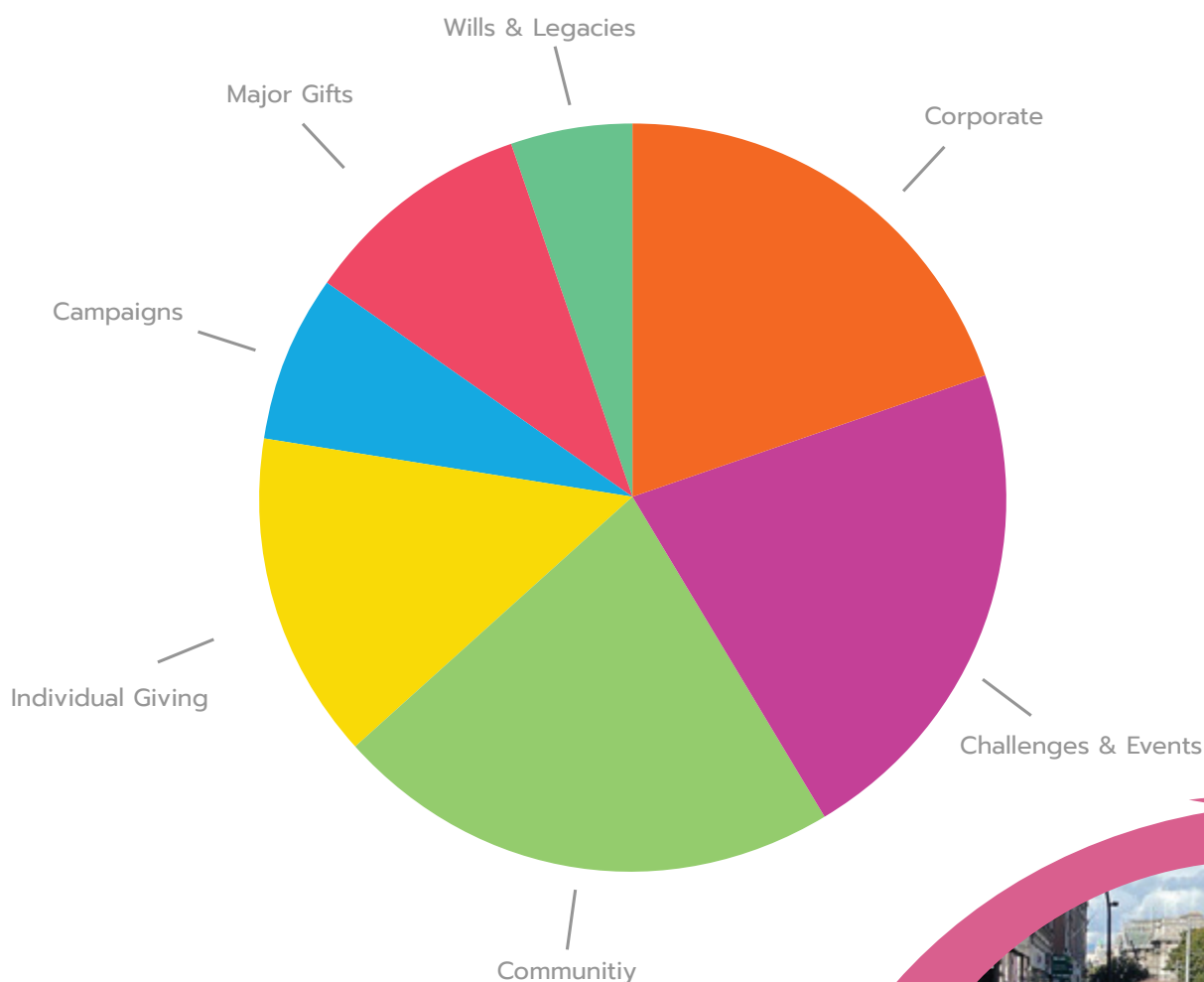
FUNDRAISING



TOTAL INCOME 2022

We couldn't fund life saving cancer research without your support.

Our Breakthrough community support us in many different ways from coffee mornings and fashion shows to corporate challenges, cycles and triathlons. This support ensures that we can continue to fund cutting-edge research to find new and better ways to treat cancer.



Corporate	€471,636
Challenges & Events	€518,071
Community	€528,808
Individual Giving	€333,070
Campaigns	€176,263
Major Gifts	€236,566
Wills & Legacies	€122,976





“

Thanks to our amazing cyclists a record amount was raised which went to fund two new projects in oesophageal and breast cancer.

”



€319,847.25

raised by cyclists for
Breakthrough Cancer Research



1300

Breakthrough
cyclists

RING OF KERRY CHARITY CYCLE 2022

On Saturday 2nd July, the Ring of Kerry Charity Cycle took place for the first time in person since 2020, after stopping due to Covid. We were thrilled to have over 1,300 cyclists cycling the 170km of 'The Ring' for Team Breakthrough. Those cyclists included our fantastic ambassadors Paschal Sheehy and David Gillick. Researchers funded by Breakthrough also joined our team and volunteers, helping at registration, food stations and the finish line.

Through the remarkable fundraising efforts of the many individuals on Team Breakthrough who took on this challenge, we raised a record amount of €319,847.25 for two new projects in oesophageal and breast cancer. What an amazing impact this simply incredible charity cycle continues to have each year!



“

The €1 million raised to date has already led to the hiring of two cancer research immunology teams and this year aims to raise funds for even more, through a variety of fundraising events.

”



QUALTRICS 5 FOR THE FIGHT

Qualtrics continued their extraordinary partnership with Breakthrough Cancer Research since reaching the incredible €1 million milestone last year, less than four years since the launch of 5 For The Fight in EMEA. The original idea behind this campaign was focused on crowdfunding - asking the public to donate €5 and then Qualtrics matching it.



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There was more international involvement with a global 5 KM run, a cycle and music festival in Belgium in memory of colleague Toon Daelman, a concert in London and many other events in Dublin, such as the annual golf classic in Luttrellstown Castle Golf Club.

We cannot express our gratitude enough to everyone at Qualtrics and 5 For The Fight for this wonderful partnership which has already allowed us to hire so many talented researchers to work on exciting new cancer research projects.

WINTER BALL

Our first Winter Ball took place in Fota Island Resort on Friday 11th November and was a fantastic success, completely selling out and raising over €58,000 for cancer research.

Guests of this black tie gala ball donned their finest tuxedos and ballgowns, with VIPs from across the Cork medical, scientific, academic, corporate and political worlds supporting generously throughout the night.





OUT IN FORCE FOR CANCER RESEARCH

“We remember the late Carl Dempsey from Salesforce, who spearheaded vital fundraising for cancer research during his life.”

Salesforce has been an amazing corporate partner of Breakthrough Cancer Research over the past few years, and despite the challenges during Covid, have found a variety of employee-led ways to support our work.

Following the tremendous success of the 170km My Way virtual cycle and Pick a Peak fundraisers last year, a group of over 150 from Salesforce Dublin took on 18km of the Wicklow Way this July to raise funds for cancer research. Leaving Crone Wood, the group summited Djouce before continuing along the trail to Roundwood.

This immense fundraising effort was made by many in memory of loved ones lost to cancer, but this year in particular we would like to remember the late Carl Dempsey from Salesforce, who had himself spearheaded so much fundraising for cancer research and sadly passed away during an adventure race last year.



VIRTUAL CHALLENGE FUNDRAISING

A recent growth area for Breakthrough Cancer Research has been in the realm of Virtual Challenge Fundraising.

Our first foray into virtual challenges began when restrictions were put in place during the pandemic, meaning organised group events weren't possible. To ensure people still had the opportunity to fundraise for our vital work, we came up with the idea of creating virtual challenges that could be taken on at any time and from any place. This ensured that our fundraisers were still firmly part of an engaged group, meaning no one felt like they were taking part on their own.

This year, we had two step challenges; '310,000 Steps in March' and again in December. We also held 'Swim 5km in June' and 'Hike 30km in September' challenges.

These challenges have mobilised thousands of people in every county in Ireland and beyond to support cancer research through Facebook or other online fundraising platforms. What's more, the networks created on social media through these events have been incredibly meaningful to those taking part – many of whom have been directly affected by cancer – with groups sharing snapshots and experiences as they raise vital funds together.

“

The challenges may be virtual but the impact is very real, and each step walked, run or hiked and each stroke swam has made a huge difference to our work.

”



3,600+
PARTICIPANTS



6.23M
STEPS



3,500KM
SWAM



27,000KM
HIKED



€141,788
RAISED FOR CANCER RESEARCH





“

We, his family and friends, hope this is a fitting way to remember him while giving something back.

”

DENIS CANNIFFE MEMORIAL FUNDRAISER

Loving husband and passionate farmer, Denis Canniffe from Bandon, Co. Cork, was just 37 years young and recently married when he passed away in October 2021 after receiving a diagnosis of Glioblastoma, a rare and aggressive form of brain cancer, 16 months earlier.

His wife Kate Canniffe recalls, 'In June 2020 Denis was diagnosed with Glioblastoma. We then went from clinic to clinic searching for answers and as we knocked on doors asking to get access to clinical trials, we were shocked to learn that only 2% of research funding currently goes to Glioblastoma despite it being one of the most aggressive cancers.'

In the months since Denis' passing, Kate decided to do something positive to help others, in his memory, and settled on the idea of a 'Mart Sale' with all proceeds going to brain cancer research. Kate felt that this would serve as a fitting tribute to his passion for all things Agri, and it would be a way for the farming community to remember Denis. Above all it would be an act of positivity

in the fight against brain cancer. 'Farming was everything to Denis and throughout his diagnosis he found comfort in the routine and the strong sense of community. We, his family and friends, hope this is a fitting way to remember him while giving something back.'

The Denis Canniffe Memorial Fundraiser was held at Bandon Mart on Easter Monday 2022, and Denis's family and Bandon Mart asked farmers across Ireland to donate stock of all ages, male and female for the sale. They also raffled pedigree Aubrac and Charolais cattle to further boost funds raised. Kate, with thanks to the amazing Bandon and farming community, raised an astonishing €61,900 to research new ways to detect and treat this difficult-to-treat cancer.



STEPPING UP FOR CANCER RESEARCH

Wishing to make an impact and raise much-needed funds for cancer research Geraldine Lynch decided to step up and took walking from pastime to challenge.

Geraldine tasked herself with a 1010km walk from Antrim to Allihies in West Cork. This grueling 6-week challenge started in Ballycastle Co. Antrim and saw Geraldine - and the many people who joined her for different sections of this trek - travel through the Cavan Way, Leitrim Way, Beara Breifne Way and onto her final destination in Allihies, West Cork.

In recognition and support of her tremendous effort Geraldine raised an astonishing €21,336, which will have such an impact on our work to make more survivors!



96FM GIVING FOR LIVING RADIOTHON

Breakthrough was delighted to once again be selected as one of five local Cork charities who were chosen to benefit from the 2022 Cork's 96FM Giving for Living Radiothon. Along with the radio presenters, many schools and businesses supported through jersey days and bake sales.

Now in its fourteenth year, the annual Cork's 96FM Giving for Living Radiothon raised a total of €383,973.68, which was divided between; Breakthrough Cancer Research, Mercy Hospital Foundation, CUH Charity, Marymount Hospice and ARC Cancer Support House. Many supporters of Breakthrough Cancer Research shared their stories on-air over the three days, giving the lived experience of cancer and how it has impacted their lives and those of their families. They also took the opportunity to express the urgent need for more research to help benefit those who currently have limited treatment options.

We were absolutely delighted to be a part of this local initiative and to receive such generous and inspiring support from local communities.





WOW – WOMEN ON THE WATER

charity in past years. Joan Collins sadly passed away at the end of 2018, and the WOW event is now run in her memory, with her daughter Odharnait and the team at Baltimore Sailing Club.

The popular cancer charity fundraiser returned to Baltimore Sailing Club following a Covid-enforced break.

Women on the Water – WOW – was setup in 2014 by Joan Collins, former Baltimore Sailing Club Commodore, following her diagnosis with melanoma. The fundraiser supports both Breakthrough Cancer Research and Marymount Hospice, and has already raised thousands for

This year saw the largest number of boats to date. The village and harbour of Baltimore transformed into a waterpark-like fun zone, with dinghies, kayaks, RIBs, sailing boats and currachs taking part in the competitions on the water. The only criteria for those wishing to join was to wear pink. We are most grateful to everyone who took part, sponsored and donated to this great event!

TEDDY DALY MEMORIAL EVENTS



Having had to change from in-person to virtual events during Covid, the Teddy Daly Memorial Climb has become a series of virtual events in recent years. This has allowed those who wish to continue to support pancreatic cancer research in memory of the late Teddy Daly to do so in ways that suit them. Such a wide choice has led to everything from hikes and golf games to Tractor Runs and other challenges.

Teddy's wife Noreen has organised many of these events with family and friends over the years, but this year went one step further with a public appeal for our pancreatic cancer research programmes. The collective total raised through such effort amounted to more than €42,080!

NATIONAL FLAG DAY

To mark World Cancer Research Day on 24th September, we held our first National Flag Day on-street collection. The outpouring of support we received from schools, businesses, community groups, choirs and many other volunteers around the country enabled us to hold collections in 20 counties. This led to the event raising over €55,000 in its first year.

We are so thankful to all who kindly gave up their time to help raise funds for cancer research around the country and we hope to build on this further next year.



MUSGRAVE GIVES BACK 2022

Over the last 20 years, Musgrave have raised over €5.2 million for a variety of charities, including Breakthrough Cancer Research, through their annual Musgrave Triathlon. Unfortunately, like so many other events, Covid restrictions meant this event has not been able to take place for some time, so in order to 'give back' in another way, Musgrave decided to create a fun run and family day in Tramore Valley Park.

Musgrave have been funding an annual PhD cancer research scholarship, and funds raised from this event will help to hire another new cancer researcher working on hard-to-treat cancers.



FINANCE



GOVERNANCE

Breakthrough Cancer Research is fully committed to openness, transparency and integrity to our donors, supporters, volunteers and funding partners by adhering rigorously to the Triple Lock standards set out by the Charities Institute of Ireland - good fundraising, transparent annual financial reporting and governance. For more information on our Governance go to www.breakthroughcancerresearch.ie.

Our Board of Directors is made up of independent individuals with diverse backgrounds who volunteer their time, expertise and passion to our vision. The Board provides the advisory and governance role for the charity. We do not pay members of our Board, cover their expenses or provide recompense in any other way.

The Board of Breakthrough has formally adopted, is signed up to, and is fully committed to achieving the standards contained within the Statement of Guiding Principles for Fundraising.

The Statement of Guiding Principles for Fundraising exist to:

- Improve fundraising practice
- Promote high levels of accountability and transparency by organisations fundraising from the public
- Provide clarity and assurances to donors and prospective donors about the organisations they support.



Best Practice in Transparency and Accountability

We, Breakthrough, have considered the Statement and believe we meet the standards it sets out.

Breakthrough's annual accounts are independently audited every year by Moore Ireland. We prepare our accounts in accordance with Irish accounting standards and with reference to the Statement of Recommended Practice (SORP) for charities.

This is a comprehensive framework that enables us to explain what we aim to do, how we go about it and what we achieve.

You can download and view our most recent audited accounts at

<https://breakthroughcancerresearch.ie/annual-reports-and-financials>

Breakthrough Cancer Research is fully compliant with the Governance Code for Community, Voluntary and Charitable Organisations, and the Charities Governance Code as set out by the Charities Regulator in 2018.

Breakthrough's Charity No: CHY19801
Registered Charity No (RCN): 20077945

FINANCIAL REPORT

STATEMENT OF FINANCIAL ACTIVITIES

(INCLUDING INCOME & EXPENDITURE ACCOUNT)

FOR YEAR ENDED 31ST DECEMBER 2022

FUNDING IS RECEIVED FROM: 100% FUNDRAISING

The investments made into the three priorities for the organisation in terms of research expenditure were:

EDUCATION & INFORMATION:

2022 - €197,698 (2021 - €149,408)

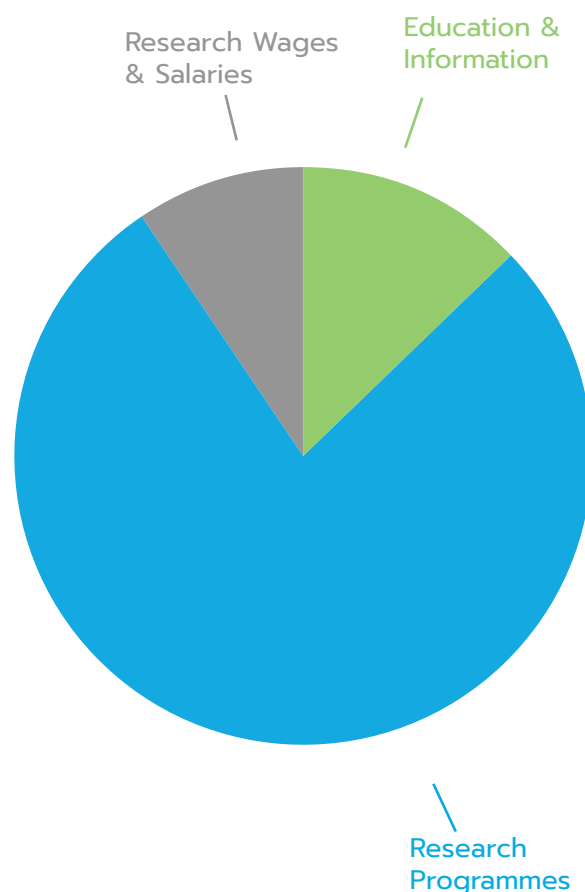
RESEARCH PROGRAMMES:

2022 - €1,191,625 (2021 - €1,063,901)

RESEARCH WAGES & SALARIES:

2022 - €140,774 (2021 - €94,815)

TOTAL: €1,530,097



These figures represent the financial year
1st January 2022 to 31st December 2022.
The gross income was €2,345,686
(2021: €2,447,326)

STATEMENT OF FINANCIAL ACTIVITIES

INCLUDING INCOME AND EXPENDITURE ACCOUNT for the year ended 31 December 2022

	UNRESTRICTED FUNDS €	RESTRICTED FUNDS €	TOTAL 2022 €	TOTAL 2021 €
Income from:				
Legacies	122,976	-	122,976	234,513
Charitable activities	1,635,976	628,438	2,264,414	2,072,264
Other income	(41,704)	-	(41,740)	140,549
Total income	<u>1,717,248</u>	<u>628,438</u>	<u>2,345,686</u>	<u>2,447,326</u>
Expenditure on:				
Raising funds	441,089	-	441,089	297,753
Charitable activities	526,104	-	526,104	523,995
Research costs	<u>1,177,996</u>	<u>352,101</u>	<u>1,530,097</u>	<u>1,308,124</u>
Total resources expended	<u>2,145,189</u>	<u>352,101</u>	<u>2,497,290</u>	<u>2,129,872</u>
Net income/(expenditure) for the year/ Net movement in funds	155,570	(307,174)	(154,604)	317,454
Fund balances at 1 January	257,558	497,260	754,818	437,364
Fund balances at 31 December	<u><u>413,128</u></u>	<u><u>190,086</u></u>	<u><u>603,214</u></u>	<u><u>754,818</u></u>

The statement of financial activities includes all gains and losses recognised in the year.
All Income and expenditure derive from continuing operations.

BALANCE SHEET

AS AT 31 DECEMBER 2022

	2022 €	€	2021 €	€
Fixed Assets				
Tangible Assets		28,922		7,266
Current assets				
Debtors	68,008	-	20,505	
Cash at bank and in hand	1,106,378		1,243,375	
	<u>1,174,386</u>		<u>1,263,880</u>	
Creditors: amounts falling due within one year	<u>(600,094)</u>		<u>(516,328)</u>	
Net current assets		574,292		747,552
Total assets less current liabilities		<u>603,214</u>		<u>754,818</u>
Income funds				
Restricted funds		190,086		497,260
Unrestricted funds		413,128		257,558
		<u>603,214</u>		<u>754,818</u>

COMMENTARY

Breakthrough Cancer Research is pleased to confirm that the accounts have been prepared in accordance with the statement of recommended practice (Charities SORP in accordance with FRS 102, effective January 2015). This reporting structure is accepted as best practice in the charity sector. Also, this is reflective of Breakthrough Cancer Research's on-going commitment to good governance and financial transparency.

The reserves for the year are €603,214 (2021: €754,818). Breakthrough Cancer Research remains in a position to support existing research projects, and to continue to fund research programmes in 2023.

The statement of Financial Activities and Balance Sheet included on page 35 and 36 respectively are an extract from the full statutory financial statement of the company for the year ended December 31st 2022, which are available on our website, www.breakthroughcancerresearch.ie

BANKERS

AIB Bank plc.
Western Road,
Mardyke, Cork

AUDITORS

Moore Ireland
Chartered Accountants
& Statutory Audit Firm
83 South Mall
Cork

SOLICITORS

Ronan Daly Jermyn
2 Park Place
City Gate Park
Mahon Point
Co. Cork

OUR BOARD OF DIRECTORS WHO SERVED THE PERIOD:

Trustees **Breda O'Sullivan**
 Michael McMahon
 Doreen O'Mahony
 Enda Lynch
 Jeffery Long
 Angela Gillian
 Kasia Whysall

Secretary **L&P Trustee Services Limited**



APPENDICES



COMMITTEES & BOARDS

Breakthrough Cancer Research has a seat at the table and is driving the conversation and direction of vital research and education in a number of key areas in Ireland. Listed below are committees and boards of which Breakthrough Cancer Research is a member:

- Health Research Charities of Ireland (HRCI)
 - Public Patient Involvement (PPI) Shared Learning Group
- Irish Cancer Prevention Network
- Irish Skin Cancer Prevention Action Plan Implementation Committee
- NCCP Early Diagnosis of Symptomatic Cancer Workgroup
- NCCP BRACA Needs Assessment Steering Committee
- National PPI Network subgroup - PPI in Lab-Based Research
- Precision Oncology Ireland (POI) Charity Subgroup
- Irish Network for Gynaecological Oncology



CONFERENCES & SPEAKING ENGAGEMENTS

Irish Association of Cancer Research (IACR)

Annual Conference, 30th March-1st April 2022:

Breakthrough sponsored a session on Poor Prognosis Cancers, featuring presentations from five early-stage researchers.

All Ireland Cancer Research Institute (AICRI)

Workshop: Current & Future Ambitions for Digital Health, University of Limerick, 27th April 2022:

Dr. Frances Drummond presented.

"Clinical Trials, from Bench to Bedside", 4th May

2022: Breakthrough hosted this public webinar with presentations by Debra O'Hare, Dr. Sharon McKenna and Dr. Tracey O'Donovan.

"Open Your Eyes to Uveal Melanoma", 26th May

2022: Breakthrough hosted this webinar, inviting Breakthrough-funded researchers Dr. Kayleigh Slater, Dr. Husvinee Sundaramurthi and Public Patient Involvement representative Melody Buckley to speak.

Virtuome 2022 Symposium, 21st June 2022:

Dr. Frances Drummond presented with Dr. Sarah Delaney, HRCI.

Thinktank for Action and Social Change (TASC)

panel discussion at the launch of the report "Understanding the challenges of cancer and socio-economic inequality" supported by MSD, in

November 2022: Panel members were Dr. Frances Drummond, Averil Power, Colm Burke and moderator Priscilla Lynch.

National University Ireland Galway "PPI in Research Conference" 2022:

This conference involved health

research charities reflecting on their experiences of PPI. Dr. Avril Kennan, CEO of Health Research Charities Ireland (HRCI), has a conversation with five research charities about their experiences of PPI, progression in their work and challenges they've faced.

Nothing about us, without us: Perspectives in Public and Patient Involvement (PPI) in Research, Maynooth University, 26th October 2022: Dr. Frances Drummond presented at this conference which was also attended by Dr. Nora Lieggi, Breakthrough Cancer Research Research Officer.

5 For the Fight mini-symposium, hosted by the Huntsman Cancer Institute, Utah, October 2022:

Dr. Melissa Conroy, Orla Dolan and Dr. Frances Drummond were invited to attend the 5FTF mini-symposium. This symposium highlighted the research funded by 5 For The Fight in this institute.

POI Mid-Term Review, July 2022: Members of each of the charity partners were active participants of the mid-term scientific review of the POI Science Foundation Ireland Strategic Partnership Programme.

World GO Day, Sept 2022: Breakthrough Cancer Research took part in the Dip or Dance Campaign, to raise awareness of Uterine Cancer Symptoms.

Celebrating the HRCI-HRB Joint Funding Scheme, 1st December 2022: Two successful awardees of the HRCI/HRB scheme with Breakthrough as partner, Dr. Ann Hopkins and Dr. Ailish Malone, RCSI

KEY RESEARCH ACHIEVEMENTS IN 2022

PUBLICATIONS BY BREAKTHROUGH CANCER RESEARCHERS IN 2022

1. Benjamin DN, O'Donovan TR, Laursen KB, Orfali N, Cahill MR, Mongan NP, Gudas LJ, McKenna SL. All-Trans-Retinoic Acid Combined with Valproic Acid Can Promote Differentiation in Myeloid Leukemia Cells by an Autophagy Dependent Mechanism. *Front Oncol.* 2022 Feb 24; 12:848517. doi: 10.3389/fonc.2022.848517. PMID: 35280824; PMCID: PMC8907478.
2. Boncheva VB, Linnebacher M, Kdimati S, Draper H, Orchard L, Mills KI, O'Sullivan G, Tangney M, Guinn BA. Identification of the Antigens Recognised by Colorectal Cancer Patients Using Sera from Patients Who Exhibit a Crohn's-like Lymphoid Reaction. *Biomolecules.* 2022 Jul 29;12(8):1058. doi: 10.3390/biom12081058. PMID: 36008952; PMCID: PMC9406176.
3. Devoy C, Flores Bueso Y, Tangney M. Understanding and harnessing triple-negative breast cancer-related microbiota in oncology. *Front Oncol.* 2022 Nov 24; 12:1020121. doi: 10.3389/fonc.2022.1020121. PMID: 36505861; PMCID: PMC9730816.
4. El Mashed S, O'Donovan TR, Kay E, O'Grady A, McManus D, Turkington RC, McKenna SL. Apoptosis and autophagy markers predict survival in neoadjuvant treated oesophageal adenocarcinoma patients. *BMC Cancer.* 2022 Aug 20;22(1):908. doi: 10.1186/s12885-022-09981-8. PMID: 35986318; PMCID: PMC9392302
5. Essa N, O'Connell F, Prina-Mello A, O'Sullivan J, Marcone S. Gold nanoparticles and obese adipose tissue microenvironment in cancer treatment. *Cancer Lett.* 2022 Jan 28; 525:1-8. doi: 10.1016/j.canlet.2021.10.017. Epub 2021 Oct 15. PMID: 34662546.
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7. Kearns N, Raigal-Aran L, O'Connell K, Davis A, Bermingham K, O'Reilly S, Collins DC, Corrigan M, Coulter J, Cleary V, Cushen S, Flavin A, Byrne F, O'Grady A, O'Neill D, Murphy A, Dahly D, Palmer B, Connolly RM, Hegarty J. The Women's Health Initiative cancer survivorship clinic incorporating electronic patient-reported outcomes: a study protocol for the Linking You to Support and Advice (LYSA) randomized controlled trial. *Pilot Feasibility Stud.* 2022 Nov 10;8(1):238. doi: 10.1186/s40814-022-01186-x. Erratum in: *Pilot Feasibility Stud.* 2022 Dec 12;8(1):255. PMID: 36357934; PMCID: PMC9648029.
8. Kirby A, Drummond FJ, Lawlor A, Murphy A. Counting the social, psychological, and economic costs of COVID-19 for cancer patients. *Support Care Cancer.* 2022 Nov;30(11):8705-8731. doi: 10.1007/s00520-022-07178-0. Epub 2022 Jun 11. PMID: 35690662; PMCID: PMC9188420.
9. Murphy A, Kirby A, Lawlor A, Drummond FJ, Heavin C. Mitigating the Impact of the COVID-19 Pandemic on Adult Cancer Patients through Telehealth Adoption: A Systematic Review. *Sensors (Basel).* 2022 May 9;22(9):3598. doi: 10.3390/s22093598. PMID: 35591287; PMCID: PMC9105995.
10. O'Dowd, Darragh et al. "Prognostic, Diagnostic and Predictive Biomarkers in the Barrett's Oesophagus Adenocarcinoma Disease Sequence." *Cancers* vol. 14,14 3427. 14 Jul. 2022, doi:10.3390/cancers14143427
11. Hogan G, Eckenberger J, Narayanan N, Walker SP, Claesson MJ, Corrigan M, O'Hanlon D, Tangney M. Biopsy bacterial signature can predict patient tissue malignancy. *Sci Rep.* 2021 Sep 17;11(1):18535. doi: 10.1038/s41598-021-98089-3. Erratum in: *Sci Rep.* 2022 Nov 15;12(1):19592. PMID: 34535726; PMCID: PMC8448740.
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20. Sundaramurthi H, Giricz Z, Kennedy BN. Evaluation of the Therapeutic Potential of Histone Deacetylase 6 Inhibitors for Primary and Metastatic Uveal Melanoma. *Int J Mol Sci*. 2022 Aug 19;23(16):9378. doi: 10.3390/ijms23169378. PMID: 36012642; PMCID: PMC9409113.
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26. O'Brien A, O'Halloran F, Mykytiv V. Minimal Residual Disease in Multiple Myeloma: Potential for Blood-Based Methods to Monitor Disease. *Clin Lymphoma Myeloma Leuk*. 2022 Jan;22(1): e34-e40. doi: 10.1016/j.clml.2021.07.032. Epub 2021 Aug 2. PMID: 34470720.
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POSTER PRESENTATIONS BY BREAKTHROUGH CANCER RESEARCHERS IN 2022

1. Presenter: O’Gorman P and Katie Dunphy

Title: Proteomic and Phosphoproteomic Analysis of Primary Myeloma Plasma Cells Identifies Distinct Phosphorylation Events Associated with Resistance to Proteasome Inhibitors using an Ex Vivo Drug Sensitivity Testing Platform.

Conference: European Proteomics Association (EuPA) Annual Congress 2022

2. Presenter: O’Gorman P and Katie Dunphy

Title: Proteomic Characterisation of the Plasma Proteome in Extramedullary Multiple Myeloma Identifies Potential Prognostic Biomarkers.

Conference: American Society of Haematology (ASH) Annual Meeting 2022

3. Presenter: O’Gorman P and Katie Dunphy

Title: Targeted Metabolomics Approach Identifies Alterations in the Plasma Metabolome of Multiple Myeloma Patients with and without Extramedullary Spread.

Conference: American Society of Haematology (ASH) Annual Meeting 2022

4. Presenter: Pat Forde/Beth Brint and Bendix M

Title:

Conference: IACR

5 Presenter: O’Sullivan M

Title: Submitted an abstract to the Connective Tissue Oncology Society (CTOS) annual meeting

Conference: Connective Tissue Oncology Society (CTOS) annual meeting

6. Presenter: O’Gorman P

Title: Proteomic and Phosphoproteomic Analysis of Primary Myeloma Plasma Cells Identifies Distinct Phosphorylation Events Associated with Resistance to Proteasome Inhibitors using an Ex Vivo Drug Sensitivity Testing Platform.

Conference: European Proteomics Forum

7. Presenter: Flanagan L

Title: Epigenetic modifier screen identifies novel combination treatment for Multiple Myeloma

Conference: Trinity St. Jame’s Cancer Institute 12th International Cancer Conference

8 Presenter: Butler M and Devlin Wall-Coughlan

Title: IRAK1 in Ovarian cancer

Conference: IACR Poster Presentations in 2022

9. Presenter: Asia Jordan

Title: Standardisation of urine as a liquid biopsy for early detection of aggressive prostate cancer.

Conference: EACR liquid biopsies conference

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Title: Standardisation of urine as a liquid biopsy for early detection of aggressive prostate cancer.

Conference: EACR liquid biopsies conference

11. Presenter: EmmaJude Lyons

Title:

Conference: Health Research Institute

12. Presenter:

Title: Evaluating Cannabinoid Receptors as a Therapeutic Target for Uveal Melanoma

Conference: EACR liquid biopsies conference

13. Presenter: Brendan Kennedy and Pendino Marzia

Title: Evaluating Cannabinoid Receptors as a Therapeutic Target for Uveal Melanoma

Conference: IACR 2022, Computational Chemistry School, ARVO 2022, School of Biomolecular and Biomedical Science (SBBS) Research Day 2022, Irish Melanoma Forum 2022, International Cannabinoid Research Society and British Pharmacology Society

14. Presenter: Melissa Conroy and Eimear Mylod

Title: Investigating the utility of CX3CR1 antagonism to promote NK cell migration towards tumour in obesity associated cancer.

Conference: Irish Society of Immunology meeting 2022

15. Presenter: Melissa Conroy and Eimear Mylod

Title: Exploring the applicability of CX3CR1 antagonism to promote NK Cell migration towards the tumour in obesity associated cancer.

Conference: EACR Congress 2022

16. Presenter: Melissa Conroy and Eimear Mylod
Title: Harnessing CX3CR1 antagonism to promote NK cell migration towards tumour in obesity associated cancer.
Conference: NK 2022

17. Presenter: Melissa Conroy and Eimear Mylod
Title: Fractalkine (CX3CL1) is a key modulator of natural killer cell migration, phenotype and function in obesity associated cancer.
Conference: European Congress of Immunology (virtual) 2022

18. Presenter: Dr. Claire Donohoe, Prof Jacintha O'Sullivan & Fiona Crotty
Title:
Conference: Poster presentation ISI 2022 conference

19. Presenter: Melissa Conroy and Caroline Marion
Title: Elucidating the pro-tumorigenic effects of fractalkine in oesophageal adenocarcinoma.
Conference: Irish Society of Immunology Annual Meeting

20. Presenter: Melissa Conroy and Caroline Marion
Title: Investigating the role of fractalkine in oesophageal adenocarcinoma tumour growth and epithelial-mesenchymal transition.
Conference: TBSI Cancer Conference 2022

21. Presenter: O'Gorman and Katie Dunphy
Title: Proteomic analysis of matched extramedullary multiple myeloma bone marrow mononuclear cells and blood plasma patient samples.
Conference: Biology Research Day 2022

22. Presenter: O'Gorman and Katie Dunphy
Title: Understanding extramedullary multiple myeloma using quantitative proteomics.
Conference: Functional Precision Medicine for Blood Cancer Workshop & Symposium 2022

23. Presenter: O'Gorman and Dr. Sinead Toomey
Title: Investigation of the Utility of Exhaled Breath Condensate (EBC) as a Liquid Biopsy in the Detection of Spatial Genomic Heterogeneity in Patients with Early-Stage Non-Small Cell Lung Cancer (ESLC)
Conference: Irish Thoracic Society Annual Meeting

24. Presenter: McKenna S
Title: Depletion of MXA expression in oesophageal cancer cell lines elevates endogenous and drug-induced autophagy.
Conference: Irish Association for Cancer research, Annual conference

25. Presenter: O'Sullivan J
Title: Gold nanoparticles coupled to a novel radiosensitizer (Pyrazinib) increased radiation sensitivity and antiangiogenic activity by rewiring mitochondrial metabolism in oesophageal adenocarcinoma
Conference: Irish Association Cancer Research

26. Presenter: Flanagan L
Title: Epigenetic modifier screen in Multiple Myeloma identifies synergism between ABT-199 and methyltransferase inhibitors.
Conference: 58th Annual IACR conference, RCSI research day, RCSI Physiology Mini-rounds, and EACR Cellular bases for patient response to conventional cancer therapies.

27. Presenter: Dr. Marion Butler
Title: The role of IRAK1 in Ovarian cancer.
Conference:

28. Presenter:
Title: Examining the applicability of CX3CR1 antagonism to promote NK cell migration towards tumour in obesity associated cancer.
Conference: Cancer Conference 2022

29. Presenter:
Title: Investigating the utility of CX3CR1 antagonism to promote NK cell migration towards tumour in obesity associated cancer.
Conference: EACR Junior Scientist awardee talk, 2022

30. Presenter: Prof Jacintha O'Sullivan and Maitiú Ó Murchú
Title: Boosting O₂ Diffusion to Improve Radiation Response in Oesophageal Adenocarcinoma
Conference: CRYSTAL3 Annual Meeting

31. Presenter: Dr. Adriele Prina-Mello and Daniella Anthea de Agrela Gomes
Title: Breakthrough cancer workshop with PPI on lay communication last November and resulted in the creation of an infographic with PPI participants.
Conference:

PRIZES AWARDED TO BREAKTHROUGH CANCER RESEARCHERS IN 2022

1. Researcher: Hayes Robert

Award: Robert was awarded Best Presentation award at the Irish Association for Cancer research, Annual conference. The title of the talk is "DEPLETION OF MXA EXPRESSION IN OESOPHAGEAL CANCER CELL LINES ELEVATES ENDOGENOUS AND DRUG-INDUCED AUTOPHAGY"

2. Researcher: Flanagan L


Award: EACR Bursary award to attend Cellular Bases for Patient Response to Conventional Cancer Therapies conference in Berlin November 2022, and RCSI International Secondment travel award to travel to Prof. Anthony Letai's lab in Dana-Farber Cancer Institute for 6-week secondment in November 2022.

3. Researcher: Pendino Marzia

Award: Shortlisted for the IACR2022 poster prize.

4. Researcher: Eimear Mylod

Award: Awarded EACR Junior Scientist 2022. It is awarded to the PhD student with the highest scoring abstract at the Irish Association of Cancer Research Meeting.



Lily Walsh Curley
Leukaemia Survivor

MAKING

MORE

SURVIVORS



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