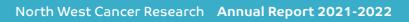
ANNUAL REPORT 2021-2022





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CHAIR'S REPORT

Looking back is sometimes difficult. I am writing this in the Spring of 2023, thinking back to October 2021 and then through to September 2022. It is fair to say that a great deal happened in that time - in health, in politics, in our region and in North West Cancer Research. During the year, we saw a change in our monarch, political upheaval, the start of a war, high inflation, financial instability and much more.



Such national and international events can have direct and significant effects on us and our lives, of course, but I don't believe that they touch us in the same way as what happens in our homes and families, especially when we experience cancer.

The effects of cancer are felt at first hand and can bring real emotional as well as physical suffering. Many of those who support North West Cancer Research will have experienced this directly and will know the challenges that it brings. They know the impacts of surgery, radiotherapy and chemotherapy upon themselves or a loved-one, the periods of illness and uncertainty. Sadly, many of you will have also experienced the loss of a close family member to this condition during the past year. Our 2021-22 financial year has seen many generous gifts in the form of legacies left to the charity. We recognise that each one of these probably reflects a family's experience of cancer, illness and perhaps loss - a story of pain and a desire that things should be different in the future. As a charity, we are immensely grateful to receive these gifts - which have made such a difference to our income this year and we are determined that we will use them well.

These generous legacies are used to fund cancer research projects, and by doing so, we are making an investment for a better future, a future where cancers are more treatable, perhaps curable, and one where families experience less pain.

As we fund essential research by academics and clinicians, we are investing in the lives of people in our region in trying to ensure that their families do not experience the same pain and grief that we have. Our work should send a message of hope to everyone who has been affected by cancer.

Excellent progress has been made in addressing the region's cancer needs, but there is still so much more to do. We will be tireless in our pursuit of new knowledge and techniques which seek to understand the cause of, improve the care of and, ultimately, find cures for cancer. I should like to take this opportunity to express my profound gratitude to our supporters for their hard work, dedication and generosity, without which we would not be able to carry out our life-saving work.

I should also like to thank my Board of Trustees, who continue to work hard on behalf of North West Cancer Research, supporting and guiding the Charity in taking forward its mission and providing valuable advice to me and to the charity's management team. A number of new Trustees have joined us in the last year and have made an excellent contribution to the Board. I also want to express my sincere gratitude to our CEO, Alastair Richards, to the whole staff team and to all those who have been involved with North West Cancer Research during 2021-22.

Miss C M Jones BA, ACG Chairman

CEO'S REPORT

Shortly after joining North West Cancer Research in 2017, I was asked why we needed an independent charity for the region? It was a question that went to the heart of who we are and what we do.



The reality is that if you live in the North West of England or North Wales, you are up to 25% more likely than most of the country to experience cancer during your lifetime. It is likely to be diagnosed later and that means that your treatment journey may be more difficult. Sadly, you are also more likely to die of cancer.

As someone who calls this region home, these are not facts to be proud of. Our environment, our industrial heritage and many other factors mean that our communities face an uphill challenge in staying well and enjoying a long and healthy life.

Our mission must be to change this. We cannot accept the status quo and we have a responsibility to use the resources available to us to reduce cancer rates, accelerate the diagnostic process and improve outcomes for patients and their families.

Fortunately, we are not alone in these aspirations. It has been pleasing during the last year to see that many others share our views and want to highlight the health problems in our region, as well as finding new solutions to address them. Other charities and public bodies are pointing out the health inequalities we face, creating a broad body of evidence around the nature and cause of the cancer problems we see at first hand. Some of them have joined with us in order to jointly fund research, while our outreach and education services are garnering increasing support.

How we tackle cancer in our communities will continue to change. North West Cancer Research has a responsibility to use resources wisely and to make sure that we identify the most cost-effective approaches to delivering improved health and life expectancy. Those individuals who established the Charity in 1948 and gave generously to it cannot have imagined the breakthroughs in medical science and treatment that we have seen. They understood the impact that cancer had in their community and refused to accept the status quo as it existed then – and still exists today.

During 2021/22 we have received a number of very significant gifts given through the legacies of supporters. We are so grateful for the bequests we have received and are determined that we should use these resources wisely. Many of those legacies were written years in advance by individuals who had been impacted by cancer and who wanted to ensure that the future was different. We are grateful too for those who continue to give to us now in so many different ways, for the Committee members, cyclists, donors, parachutists, cake bakers and many others. I also want to thank our Board of Trustees for their support. They give their time freely and we benefit from having a Board with a broad range of relevant skills and great experience. They ensure that the charity is well run and using its resources effectively. Crucially, they also share a vision around tackling cancer in our region.

For North West Cancer Research, we know why we are here. We have a clear mission and know what we want to achieve. We need to change the health realities of our region and to ensure that in the future our communities are able to live longer and healthier lives. We welcome all who want to join us in this.

Together, we will achieve a cancer-free future.

Alastair Richards Chief Executive Officer

North West Cancer Research Annual Report 2021-2022



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ACTIVITIES REPORT

North West Cancer Research is dedicated to putting the region's cancer needs first by tackling the cause, improving the care and finding the cure for cancer. These are big and ambitious goals which we hope to achieve through two charitable objectives:



We are a research funder who funds work at all stages of the research pipeline, from the earliest cancer discovery work to studies which address patient experiences, inequalities and the environmental factors behind cancer



Information, outreach and education

Our work in this area is growing as we seek to provide people of all ages and from varied backgrounds with information which will help them to live healthily, reduce their risk of cancer and recognise the signs and symptoms of different forms of the disease Our organisational strategy supports these objectives and during 2020 the Board defined three key areas of work:

- Understanding our region We need to understand why cancer is a challenge within our region
- Undertaking research into the cause, care and cure for cancer
- Raising awareness of cancer in our region and helping to prevent it developing

RESEARCH

At the end of the financial year, the Charity had 62-active research projects operating at nine locations across the region. Projects are funded through a variety of organisations including universities and NHS Trusts as well as patients being able to participate through a range of hospitals, including all of the major cancer treatment centres in the region. These projects had a cost of E9.2m in total with the majority of them providing funding over a number of years.

During the year, we funded 10 new projects at a cost of E2.1m. All of the projects were focused on cancer types which impact people within our region including pancreatic, colorectal, head and neck and other cancers. Much of our funding during the year went to translational projects – those which take existing knowledge and which seek to accelerate the understanding of that for the benefit of patients.

All of our funded research is shared nationally and internationally and our researchers are encouraged to author and publish papers, as well as visiting conferences and other research meetings to ensure that their work benefits local, national and international knowledge around cancer.

Research Governance

North West Cancer Research is a member of the Association of Medical Research Charities (AMRC) and this means that we follow externally laid down principles when deciding which research applications to fund. All projects are subject to external review by experts from the UK and beyond, as we seek to ensure that we only fund the best work and that projects break new ground in research.

Projects go before an independent research funding panel in order to rank them against other applications for funding, so that only the very best work is funded. These research panels are made up of experts from the academic and clinical communities across the UK. Potential conflicts of interest are carefully managed.

We seek to ensure each panel is closely aligned with the work funded, to make sure that their expertise is focused on relevant research applications. Each panel oversees a funding round and then, based on the merits of the applications received, the advisory group makes recommendations to the Board. The final decision on how many projects to fund lies with the Board of Trustees.

The Charity would like to thank all of the researchers, scientists, academics and others who have given their time this year in order to review and report on the project applications received. This process for gaining funding is highly competitive and therefore the task of reviewing applications is one of growing complexity.

Public and patient representation in advisory groups

We strive to fund research that is relevant and important to our local population. The patient voice is vital to influence our decisions on the importance of the funding applications we receive, as well as contributing to our future objectives.

We have engaged with public and patient representatives and are moving towards fully embedding them in our activities in order to bring the patient voice and perspective into our decision making more fully. We are grateful for the time and effort these experts by experience give and for their valuable contributions to our decision-making.





Working in partnership with others

In recent years, the Charity has recognized the importance of working with others in order to benefit from their expertise and to share the costs of research work. By the close of the financial year we were jointly funding work with six other charities as follows:

- **Tenovus Cancer Care** Working with Tenovus, we have jointly funded a study examining how the remote consulting tools used by GPs during the pandemic help and possibly hinder patients who have cancer symptoms.
- Kidney Research Northwest -Kidney cancer is relatively rare but because of this it is hard to diagnose. With KRNW, we have jointly funded a pioneering study of Wilm's tumour, a type of childhood cancer, in order to improve the treatment of this.
- The Bloom Appeal The Bloom Appeal focuses on blood cancers such as leukaemia which are common in our region and so we are delighted to have funded a study with them to advance our understanding of aggressive cases of lymphoma and chronic lymphocytic leukaemia.
- Oracle Cancer Trust Oracle focus on head and neck cancers – which are significantly more common in our region than in more affluent parts of the UK. We have jointly funded with them

a project to understand what drives poor patient outcomes in our region.

- **Kidscan** Kidscan funds research into childhood cancers – which can be rare but which are devastating in their effect. We have worked with them to fund research into medulloblastoma – a childhood brain cancer.
- **Cancer Research Wales** We are excited to be partnering with Cancer Research Wales on the ThinkCancer project which seeks to improve the time taken for cancer patients to be referred to specialist services and to assist GPs and their teams in recognizing the warning signs of cancer.

Further partnerships will be funded in 2023/24.

Our approach of working in partnership also means that we have joined and benefitted from the expertise of two alliances. These are:

- **Cancer52** This charity brings together organisations which focus on less common cancers but which count for a disproportionate number of cancer deaths.
- NHS North West Coast Applied Research Collaboration - This grouping brings together NHS Trusts and universities in our region to drive forward pioneering research and to ensure that our efforts are not in isolation but are coordinated with others.

North West Cancer Research is also a not-for-profit partner of the NHS Clinical Research Network.

Developing the cancer scientists of tomorrow

We continue to invest funds to help build and sustain research capacity in our region. This funding ensures the highest quality research occurs locally and develops the next generation of cancer researchers. Funding in this area is through a number of different streams including:

- Masters in Research 1-year qualifications
- PhD studentships
- Research Development Funding
- Funding for lectureships, Fellowships and other posts

INFORMATION, OUTREACH AND EDUCATION

Of growing importance to North West Cancer Research, is our information, outreach and education work.

We directly engage with communities across the region to improve understanding of the ways to prevent cancer, as well as highlighting the early warning signs in order to give people the information they need to live healthier, longer lives. This award-winning work emphasises key risks and gives people the practical skills and tools to become advocates for early diagnosis, wellbeing and healthy living in their communities.

We work closely with Public Health teams and community groups to ensure that our activities are tailored to meet the specific needs of our region.

Recent engagement work has included:

- A public skin cancer campaign to educate and involve the public in activities that increase their understanding of how to keep safe in the sun and prevent skin cancer as well as recognising the early warning signs
- A series of interactive presentations to businesses across the region to help employees understand their individual risks and encourage early diagnosis
- A comprehensive school engagement programme providing hands-on sessions that develop an understanding of the science behind our work, whilst instilling healthy behaviours at an early age

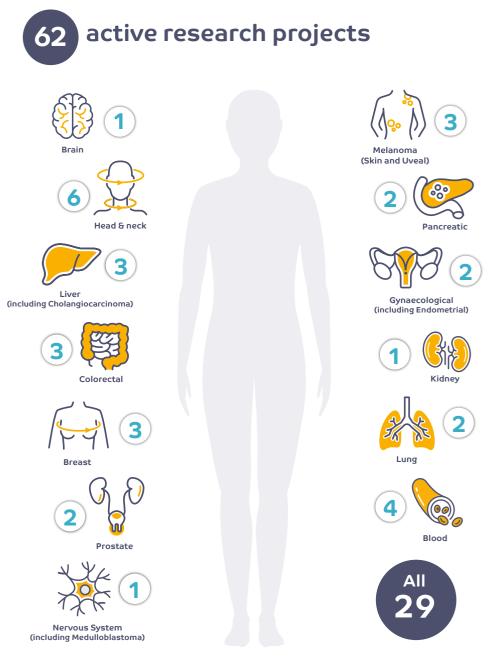






RESEARCH PROJECTS BY CANCER TYPE

Our research projects are focused on multiple cancer types, ensuring we maximise the impact of our work across our community.



Total cancer types = 67 due to overlap in research areas covered by 62 individual projects including studentships and research development grants.

CASE STUDY

Pancreatic cancer is one of the most aggressive and lethal types of cancer, with a five year survival rate of just 7%. Pancreatic cancer represents a significant public health problem in the North West which has one of the highest incidence and death rates in the UK.



Advancement in treatments for this disease has been negligible, which is mainly due to the gap in our understanding of the complex biology of pancreatic cancer.

A team of researchers based in Liverpool is hoping to address this gap by identifying currently unknown 'negative immune checkpoint regulators' existing in pancreatic cancer cells.

Negative immune checkpoint regulators are molecules that prevent Cytotoxic T Cells (T Cells) from working effectively. T Cells are an important component of the immune system, which seeks to destroy damaged cells.

Previously, immunotherapies that target the two most studied negative immune checkpoint regulators (PD-1 and CTLA-4) have revolutioni zed cancer treatment. Blocking these negative immune checkpoint regulators reactivates the useful T Cells to allow them to kill tumour cells. Whilst there has been great success with this method in several other cancer types, these methods do not work on pancreatic cancer which suggests that additional negative immune checkpoint regulators are still blocking T Cell function in pancreatic cancers.

The goal of this project is to identify the negative immune checkpoint regulators that are active in pancreatic cancer and ultimately develop treatments to target these, reinvigorating the patient's immune system to fight pancreatic cancer.

T Cells are an important component of the immune system, which seeks to destroy damaged cells





CURRENT FUNDING

LANCASHIRE AND CUMBRIA

Summer Studentships at the Division of Biomedical and Life Sciences Dr Sarah Allinson £15,600.00 /2 years covering 2021 & 2022

The role of NSMCE2-dependent SUMO modification in the replication stress response Dr Elaine Taylor, Dr Mick Urbaniak E199,908.00 /3 years

Living Well During and Beyond Treatment for Gynaecological Cancer: Exploring the Lived Experiences of Patients Undergoing Treatment for Gynaecological Cancer Dr Lisa Ashmore, Mr Daniel Hutton, Dr Lynda Appleton, Dr Vicky Singleton, Dr Karen Whitmarsh,

Ms Janet Johnson

E118,787.00 /2 years

Funding for a Lecturer and Fellow in Cancer Research with x 2 PhD students

The funding provides support for the appointment of a Lecturer in Cancer research, along with a Fellow, two PhD students and lab-costs for 5-years. It has been match-funded by Lancaster University. E441,296.00 /5 years Small molecule induced degradation of centrosome clustering proteins: development of a novel, cancerspecific therapeutic approach Dr Andrew Fielding, Dr Morgan Gadd £232,696.52 /3 years

Analysis of an RNA export factor required for cell division and maintenance of genome stability Dr Elaine Taylor and Dr Howard Lindsay E231,271.00 /3 years

Analysis of the role of CIZ1 in maintenance of genome stability and recovery form DNA replication stress Dr Nikki Copeland, Dr Chris Staples, Professor Jason Parsons E257,081.00 /3 years

Early predictive detection method for lung cancer via vibrational spectroscopy of liquid biopsy Dr Danielle Bury, Professor Francis Martin, Dr Tarek Saba, Dr Thomas Bongers, Dr Camilo de Morais £129,054.82 /3 years

PhD studentship: Understanding how cells regulate DNA replication to maintain genome stability Dr Nikki Copeland (Supervisor), Freya Ferguson (Student) £105,500.00 /3 years Mapping geographically co-occurrent cancers in the Morecambe Bay area for designing targeted communitybased interventions

Dr Luigi Sedda, Dr Jessica Mendes, Professor Alison Birtle, Dr Andy Knox, Ms Lisa Jones, Dr Hannah Timpson, Professor Peter Atkinson £170,543.30 /2 years

Developing Raman spectroscopy as a diagnostic tool for prostate cancer – A potential non-invasive alternative to serum PSA (Prostate Specific Antigen) testing and prostate biopsies

Professor Ihtesham ur Rehman, Professor Alison Birtle, Ms Sarah Hart, Mr Colin Cutting, Dr Brendan Tinwell E249,990.81 /3 years

Immunotherapy and Palliative Care Trajectories (IMPACT): a mixed-methods study mapping illness trajectories for people with advanced cancer receiving immunotherapy treatment to identify palliative care need

Dr Sarah Brearley, Professor Catherine Walshe, Dr Amy Gadoud, Dr Anastasia Ushakova, Dr Manon Pillai, Dr. Fiona Kiely £239,536.83 /2 years

Exploring the potential of CDK5 type-II inhibition: towards new glioblastoma treatments

Dr Joseph Hayes £4,000.00 – <12 months PhD studentship: How is the immune system alerted to replication stress and DNA damage in keratinocytes during immunosurveillance against cutaneous squamous cell carcinoma? Dr Leonie Unterholzner (Supervisor), Otto Wheeler (Student) £105,500.00 /3 years

Finding My Way UK: Adaptation and replication testing of the benefits of online psychological support for cancer survivors

Professor Nicholas Hulbert-Williams, Dr Lee Hulbert- Williams, Dr Lisa Beatty, Professor Bogda Koczwara, Dr Laura Ashley, Professor Neil Coulson, Dr Peter Hall, Professor Eila Watson, Mrs Sue Millington, Mr Richard Jackson E294,646.00 /3 years

PhD studentship: 'Caring, it's just what you do isn't it?': The psychosocial impact of a cancer diagnosis on informal caregivers Dr Brooke Swash, Professor Nicholas Hulbert-Williams, Professor Valerie Morrison and Ms Lorraine Wright (Student) E93,064.00 /3 years

PhD studentship: A mixed method study to describe the factors associated with palliative care inequalities experienced by cancer patients in the North West, and the impact of these inequalities Dr Amy Gadoud, Dr Sarah Brearley, Dr Maddy French E99,189.30 /3 years



CURRENT FUNDING

NORTH WALES & CHESHIRE

Autophagy dependent survival following Mec1ATM/ATR inactivation Dr Rita Cha E196,116.00 /3 years

KESS2 MRes Studentship funding Funding for four MRes students along with two PhD students £97,500.00 /3 years

Patient centred benefit-risk assessment of treatment for colorectal liver metastases in North West England and North Wales Dr Emily Holmes, Professor Simon Gollins, Mr Stephen Fenwick, Mrs Louise Jones, Professor Dyfrig Hughes E67,301.00 /1 year KESS2 MRes Studentship Funding 21/22 Dr Edgar Hartsuiker E27,000.00 /2 years

PhD studentship: Daughter strand gap prevention by MRNIP as a determinant of therapeutic response in HNSCC and ovarian cancers Dr Christopher Staples, Professor Jason Parsons, Professor Richard Edmondson £105,500.00 /3 years



MERSEYSIDE

Forcing angiogenesis: Transcriptional control by integrindependent mechanotransduction during angiogenesis

Dr Mark Morgan, Dr Katarzyna Wolanska £224,182.00 – 3 years

Towards the clinical positioning of a first selective DUB inhibitor

Dr Sylvie Urbe, Professor Michael Clague, Professor Barry Pizer, Dr Claire Heride £141,569.00 – 2 years

Non-canonical protein phosphorylation in human cancer cells

Professor Claire Eyers, Professor Patrick Eyers, Dr Andrew Jones £229,675.00 – 3 years

The role of the ERK5 signalling axis in BRAF inhibitor-resistant melanoma progression

Dr Mike Cross, Dr Rowan Pritchard-Jones, Dr Cathy Tournier, Dr Emanuele Giurisato, Professor Harish Poptani, Professor Clare Eyers £229,883.00 – 3 years

Integrating biomarkers to stratify adjuvant chemotherapy in pancreatic cancer patients

Professor William Greenhalf, Professor Dan Palmer, Professor Eithne Costello £193,220.00 – 3 years Kinome profiling and mass cytometry as tools to detect rewiring of B cell receptor signalling in the malignant cells of chronic lymphocytic leukaemia patients taking ibrutinib Professor Joseph Slupsky, Professor Ian Prior £217,307.00 – 3 years

Characterisation of the tumourimmune microenvironment in metastatic uveal melanoma Professor Sarah Coupland, Dr Carlos Rogerio de Figueiredo E132,434.00 – 2 years

Function of stroma-derived gas6 in pancreatic cancer progression and metastasis

Dr Ainhoa Mielgo, Mr Robert Jones £114,450.00 – 3 years

Improving the biological response of proton beam therapy in head and neck cancer Professor Jason Parsons

E202,129.00 – 3 years

Sensing tension: Bidirectional feedback mechanisms controlling breast cancer invasion

Dr Mark Morgan, Dr Tobias Zech, Dr Dean Hammond, Dr Pere Roca-Cusachs, Ms Louise Jones and Professor John Marshall £233,087.00 – 3 years



Tribbles pseudokinases: Analysis of cancer-associated signalling mechanisms

Professor Patrick Eyers, Dr Dominic Byrne, Professor Claire Eyers E221,262.00 – 3 years

DUB on the Tracks: USP31, a new regulator of microtubule dynamics in cancer cells

Professor Michael Clague and Professor Sylvia Urbe £128,850.00 – 3 years

A prospective study of genomic landscape of brain metastasis secondary to breast cancer utilising cell free DNA derived from cerebral spinal fluid Investigators

Professor Carlo Palmieri, Professor Janet Brown, Dr Vinton Wai Tung Cheng, Dr Ellen Copson, Dr Athina Giannoudis, Mr Michael Jenkinson, Mr Richard Jackson, Dr Iain MacPherson, Professor Jacqui Shaw and Mrs Lesley Stephen £254,387.35 – 3 years

"Imaging in the Window of Opportunity" Evaluating the role of advanced MRI techniques in detecting early response to immune checkpoint inhibition in a Head and Neck Cancer window of opportunity trial

Mr Andrew Schache, Professor Harish Poptani, Dr Joe Sacco, Dr Rahcel Brooker, Ms Eftychia-Eirini Psarelli, Dr Kumar Das, Dr Maneesh Bhojak, Dr Rebecca Hanlon,Dr Gaurav Sundar E98,041.75 – 18 months

Head and neck cancer/DNA damage and repair

Dr Gabrielle Grundy,Professor Jason Parsons E448,683.00 – 5 years

Exploiting the soluble isoform of immune checkpoint receptor CTLA-4 to improve the treatment of cancer

Dr Lekh Dahal, Professor Mark Cragg, Professor Joseph Slupsky, Professor Sir Munir Pirmohamed, Dr Frank Ward E248,333.00 – 3 years

Investigation of volatile organic compounds to diagnose and stratify men with prostate cancer

Professor Chris Probert, Professor Philip Cornford, Mr Henry Lazarowicz, Marta Garcia-Finana E299,991.92 – 3 years

PhD studentship: Insights into liver regeneration and novel strategies aimed at enhancing crucial hepatic repair

Dr Ian Copple (Supervisor), Tobias Bunday (Student) £105,500.00 – 3 years

PhD studentship: Function of cancer-associated fibrosis in regulating tumour immunity and response to immunotherapy Professor Michael Schmid (Supervisor), Nicole Simms (Student) £105,500.00 – 3 years

PhD studentship: Defining and drugging the role of BAP1-mutation in the invasive behaviour of mesothelioma and uveal melanoma Professor Judy Coulson (Supervisor), Martina Tripari (Student) £105,500.00 /3 years

PhD studentship: Cancer Proteomics: Deciphering the cellular targets of clinical protein kinase inhibitors Professor Patrick Eyers (Supervisor), Nefeli Boni-Kazantzidou (Student) £138,089.00 /4 years

PhD studentship: Investigating the use of short activating RNAs (saRNAs) to upregulate tumour suppressor genes as a novel therapeutic approach in hepatocellular carcinoma (HCC) Dr Ian Copple (Supervisor), Georgina Gregory (Student) £105,500 /3 years

PhD studentship: Augmenting the tumour cell immune response through destabilisation of PD-L1

Professor Mike Clague and Professor Sylvie Urbe (Supervisor), Georgia Guillbert (Student) £105,500 /3 years

PhD studentship: Releasing the cell cycle arrest with PROTACs to enhance DNA-damaging therapies

Dr Morgan Gadd, Dr Sarah Allinson, Professor Jason Parsons (Supervisors) and Lauryn Buckley-Benbow (Student) £105,500 /3 years

PhD studentship: Characterising the temporal host and tumour response to neoadjuvant therapy in metastatic rectal cancer

Dr Ainhoa Mielgo, Dr Jason Parsons, Mr Dale Vimalachandran, Mr Robert Jones, Professor Michael Schmid and Mr Jayden Gittens (Student) E104,961.00 /3 years

Defining the hepatic metastatic niche in colorectal cancer on a single cell basis Dr Ainhoa Mielgo £12,400.00 – <12 months

Examining the impact of proton beam therapy on DNA replication efficiency and stress in head and neck cancer and glioblastoma cell models Dr Jason Parsons E10,000.00 – <12 months

YB-1 regulation during Tumour Hypoxia Dr Niall Kenneth £14,942.00 – <12 months

Understanding how uveal melanomas utilise meiotic SYCP1 to become therapy resistant and harnessing it in the clinic Dr Urszula McClurg E11,000.00 – <12 months

Identifying the mechanisms underlying T-cell exhaustion in pancreatic tumours Dr Ainhoa Mielgo and Professor

Michael Schmid E255,655.00 /3 years



Translational relevance of the Stimulator of Interferon Genes (STING) pathway and viral infection in follicular lymphoma

Dr Lekh Dahal, Professor Andy Pettitt, Dr Carrie Duckworth, Professor Dean Naisbitt £239,792.00 /3 years

A novel in vivo model for studying and targeting Ras-driven cancer

Professor Ian Prior E223,763.75 /3 years

Investigating a stratified approach to mesothelioma treatments targeting metabolism using a novel chick embryo patient-derived xenograft model

Professor Judy Coulson, Dr Joe Sacco, Dr Anne Hermann, Mr Michael Shackcloth, Professor Peter Szlosarek, Professor Harish Poptani, Mr Tony Murphy £274,405.55 /3 years

PhD studentship: "PROTACing medulloblastoma: turning existing chemistry upside down to design a new therapeutic approach" Professor Michael Clague, Professor

Sylvie Urbe, Professor Barry Pizer, Dr Igor Barsukov – Joint with Kidscan, £75,000.00 /3 years

Acceptable and efficient early screening tests for endometrial cancer (AESTEC) Study Professor Dharani Hapangama £13,086.00 – <12 months

PhD studentship: Establishing the immune-profile of cholangiocarcinoma and the utility of human precision cut tumour slices (hPCTS) as a platform to assess immunotherapy response Dr Laura Randle, Professor Christopher Goldring, Mr Timothy Gilbert, Mr Hassan Malik, Professor Daniel Palmer £104,970.00 /3 years

Acceptable and efficient early screening tests for endometrial cancer (AESTEC) Study

Professor Dharani Hapangama £13,086.00 – <12 months

MANCHESTER

Deciphering evolution of Small Cell Lung Cancer from diagnosis to post chemotherapy disease progression: a search for new drug targets

Professor Caroline Dive, Professor Fiona Blackhall, Dr Kristopher Frese, Dr Alastair Kerr £105,000.00 /3 years

JOIN FUNDING PARTNERSHIPS

Investigating and explaining contemporary patterns and trends in inequalities across the head and neck cancer pathway: understanding the roles of deprivation and region

Professor Linda Sharp, Dr James O'Hara, Dr Laura Woods, Professor Clare Bambra, Mrs Val Bryant, Dr Jonathan Pratschke, Dr Manuela Quaresma £124,152.00 – 1 year

ThinkCancer!: A pragmatic randomised controlled phase III trial of a novel behavioural intervention for primary care teams to promote earlier cancer diagnosis with embedded process and economic evaluation Professor Claire Wilkinson –

£1,595,745.00 funded by Cancer Research Wales and North West Cancer Research

PhD studentship: Understanding barriers and enablers to use of primary care remote consulting for suspected cancer symptoms among vulnerable populations

Dr Julia Hiscock (Supervisor), Stefanie Disbeschl (Student) – joint with Tenovus, £75,000 (3 years) PhD studentship: Creation of cell lines modelling complex karyotype in B cell lymphomas using CRISPR/Cas9 Professor Joseph Slupsky, Abigail Clark (Student) – Joint with The Bloom Appeal, £105,000.00 /3 years

Investigating whether chemotherapy-induced senescence affects the behaviour of cancer stem cells in Wilms' tumour Dr Bettina Wilm – Joint with Kidney Research North West, 149,954.87 /2 years



CASE STUDY

Ovarian and head and neck cancers are amongst the top ten cancers that occur disproportionately in the region, with incidences of patients with head and neck cancers 3.5 times the national average, and rates of ovarian cancer in Flintshire, Gwynedd and Anglesey between 29 and 38% higher than the rest of Wales.



The project was inspired by previous research which found that some ovarian cancer patients with the BRCA gene responded well to medicines called PARP Inhibitors. PARP Inhibitors supress the PARP protein found in the BRCA cancer cells, stopping the protein from repairing the cancer cells, which then allows the cancer cells to die.

allows the cancer cells to die. The newly identified protein, named MRNIP, is found only in cancer cells and not healthy tissue, and much like the BRCA gene in ovarian cancers, MRNIP stops DNA gaps occurring in tumour cells and helps the cancer to thrive. Cancer cells lacking the

MRNIP are more likely to respond to chemotherapy and radiotherapy.

The team are now targeting the MRNIP protein with chemotherapy, radiotherapy, PARP inhibitors and novel drugs and will monitor the responsiveness to the cells and link the findings with the level of DNA gaps occurring to provide a route forward for new, more effective treatments for patients that will hopefully improve survival rates of cancer patients in the region.

Cancer patients with the BRCA gene responded well to medicines called PARP Inhibitors





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FINANCIAL SUMMARY 2021-2022

This summary on pages 26-29 gives an overview of how we have performed during the financial year ending 30 September 2022. The full Annual Report and Financial Statements are available from the North West Cancer Research office or the Charity Commission website.



EXPENDITURE

CHARITABLE ACTIVITIES **E2,408,486**

E31,384

INVESTMENT MANAGEMENT

FUNDRAISING

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CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES

FOR THE YEAR ENDED 30 SEPTEMBER 2022

	Unrestricted funds 2022	Restricted funds 2022	Total funds 2022	Total funds 2021
INCOME FROM:				
Donations and legacies	3,882,248	757,570	4,639,818	1,792,773
Investment income	256,435	-	256,435	261,502
TOTAL INCOME	4,138,683	757,570	4,896,253	2,054,275
EXPENDITURE ON:				
Raising funds:				
Fundraising and legacy generation costs	585,712	-	585,712	553,923
Investment management	31,384	-	31,384	34,477
Charitable activities	2,303,910	104,576	2,408,486	1,526,210
TOTAL EXPENDITURE	2,921,006	104,576	3,025,582	2,114,610
NET INCOME/(EXPENDITURE) BEFORE INVESTMENT GAINS Gains/(losses) on investments	1,217,677	652,994	1,870,671	(60,335)
	(1,030,141)	-	(1,030,141)	1,220,320
NET INCOME/(EXPENDITURE) BEFORE TRANSFERS	187,536	652,994	840,530	1,159,985
Transfers between funds	652,994	(652,994)	-	-
NET MOVEMENT IN FUNDS	840,530	-	840,530	1,159,985
RECONCILIATION OF FUNDS: Total funds brought forward	4,570,907	-	4,570,907	3,410,922
TOTAL FUNDS CARRIED FORWARD	5,411,437	-	5,411,437	4,570,907

CONSOLIDATED BALANCE SHEET

FOR THE YEAR ENDED 30 SEPTEMBER 2022

	Total funds 2022	Total funds 2021
FIXED ASSETS		
Tangible assets	2,614	4,265
Investments	8,049,550	9,260,053
	8,052,164	9,264,318
CURRENT ASSETS		
Stocks	17,193	17,100
Debtors	1,150,651	735,532
Debtors: amounts falling due after more than one year	127,174	102,072
Cash at bank and in hand	2,129,678	387,629
	3,424,696	1,242,333
CREDITORS: amounts falling due in less than one year	(3,409,817)	(2,995,168)
NET CURRENT ASSETS/(LIABILITIES)	14,879	(1,752,835)
TOTAL ASSETS LESS CURRENT LIABILITIES	8,067,043	7,511,483
CREDITORS: amounts falling due after more than one year	(2,655,606)	(2,940,576)
NET ASSETS	5,411,437	4,570,907
CHARITY FUNDS		
Restricted funds	-	-
Restricted funds Unrestricted funds	- 5,411,437	- 4,570,907

TRUSTEES, ADVISORS AND PATRONS

Trustees and officers of the Board

Miss C M Jones BA, ACG Chairman and Chair of the Nominations Committee

Mrs F Street Resigned 28 April 2022. Vice Chair to this date

Dr M Carter CPsychol AFBPsS Vice Chair from 28 April 2022

Mr S Anantharaman Appointed 28 April 2022

Mrs H Atherton Chair of the Marketing and Fundraising Committee

Mrs C Bond CPFA Resigned 31 December 2022.

Dr A Fearon Appointed 28 September 2022 **Mr S Claus LLB** Resigned 28 April 2022 **Mr M Haig**

Ms F Hewison Appointed 10 February 2020

Dr S Kothari

Mr N Lanceley FCA, DL Resigned 28 April 2022

Mr P Moonan Appointed 28 April 2022 **Mr M Ore**

Dr P Robertshaw PhD, Dip DM

Mr A Stalker Appointed 28 April 2022

Mr P Webster Resigned 31 December 2022 **Mr J Willis**

Appointed 28 April 2022

Patrons

The Most Reverend Malcolm McMahon The Archbishop of Liverpool The Right Reverend Mark Tanner The Lord Bishop of Chester The Right Reverend Paul Bayes The Bishop of Liverpool The Right Reverend Gregory Cameron The Bishop of St Asaph The Right Reverend Peter Eagles The Bishop of Sodor and Man The Right Reverend Beverley Mason The Bishop of Warrington Mark Blundell Lord Lieutenant of Merseyside Prof Dame Janet Beer The Vice Chancellor, The University of Liverpool Prof Ian Campbell The Vice Chancellor, Liverpool John Moores University Dr Steve Ryan The President of the Liverpool Medica Institution The Most Honourable David Cholmondeley The Marquess of Cholmondeley Lord Mostyn Dame Lorna Muirhead DBE Henry Bowring Michael Potts FCA, DL



Registered office

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NatWest 247 High Street, Bangor, Gwynedd LL57 1RW

Solicitors

Brabners LLP Horton House, Exchange Flags, Liverpool L3 9QJ

Investment Managers

Investec Wealth and Investment Ltd The Plaza, Old Hall Street, Liverpool L3 9AB

Independent Auditors

Crowe U.K. LLP The Lexicon, Mount Street, Manchester M2 5NT

With Thanks

Elda Latin Charitable Trust Charles Brotherton Trust Lord Leverhulme's Charitable Trust Sir Donald and Lady Edna Wilson Charitable Trust Duchy of Lancaster Benevolent Fund Groundwork UK Liverpool Charity and Voluntary Services The Red Rose Charitable Trust Jacks Supermarket Hemby Trust **Farleys Solicitors LLP** The Robert and Evelyn Maud Hall Charitable Trust The L A Jones Charitable Trust Dow Foundation The John Hatt Trust Hill Dickinson The Pilkington Charities Fund

We are grateful for the vital contribution that legacies make to the work of North West Cancer Research. Our heartfelt thanks go to the estates of:

Pauline Alderton James Ashurst Sandra Battison Ethel Jean Beddow Patricia Blythe John Bolton Brenda Florence Brindley Maureen Briscoe Robert William Bunn Brian Chappell Sandra Chivers Beryl Davis Ann Sybil Evans Frederick Richard Farrall Lynne Gallagher Sylvia Gough Albert Haworth Sheila Holgate Margaret Irene Hopwood Gordon Hutcheon Delysia Edith Jones William Ian Jones Eileen Kaye Eileen Lewis Dorothy Liggins Catherine MacWilliam Joyce Moss Janet Nesbitt Margaret Mary Poole Kenneth Powell Nigel Robinson David Singleton Barbara Mary Statham Dennis Taylor Ivor Taylor Ann Walker Kathleen Mary Wood

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Visit **nwcr.org** or call **0151 709 2919** or email: **info@nwcr.org** for more information

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