CANCER RESEARCH UK | MANCHESTER INSTITUTE

MANCHESTER 1824
The University of Manchester

Newsletter

Winter 2022

FEATURE - INSTITUTE SCIENTISTS REUNITE FOR COLLOQUIUM 2022

Meet the New Students

Manchester Conferences

Publications

Awards and Prizes

Director's Introduction

It is a pleasure to introduce the latest edition of the Cancer Research UK Manchester Institute newsletter. Here, we give readers a snapshot of life at the Institute, so I hope you enjoy discovering our latest research news, activities and events.

First of all, I am delighted to announce that Dominic Rothwell is the new Deputy Director for the CRUK Manchester Institute Cancer Biomarker Centre. Dominic has been successfully leading the Nucleic Acids Biomarker team for several years. This is a pivotal appointment for the Cancer Biomarker Centre, the Institute, CRUK Manchester Centre and the cancer research community in Manchester. I welcome Dominic's support and I look forward to more success as we move into our laboratories in the new building next year.

Connected communities are critical for the advancement of science and this season has seen many scientific meetings return to the calendar as in person events, enabling us to reconnect with colleagues and discuss the latest research developments.

This included the Institute's Colloquium this year at the Alderley Park Conference Centre. It was clear that we had all been missing these types of interactions. I would like to thank David Jenkins from the Finance team for his efforts in securing several exhibitors that helped fund the event.

Other meetings that took place locally are highlighted in this newsletter. Manchester welcomed the Greater Manchester Cancer Meeting in October and the first ever Greater Manchester Cancer Awards were launched this year. I am proud of the digital Experimental Cancer Medicine Team who won the Commitment to Equality Award for Encouraging inclusivity in technology clinical trials. Congratulations to the team.

As Co-Director of the CRUK Lung Cancer Centre of Excellence, it was a pleasure to open the CRUK Lung Cancer Conference in Manchester. It is an important occasion that brings the lung cancer community together, something we have not been able to do since before the pandemic. I am pleased that several members of the Cancer Biomarker Centre – including many of our young scientists – participated in the meeting by giving talks and presenting posters.

Lung cancer is a large focus of the Cancer Biomarker Centre and is a disease that I have spent most of my career researching. I am therefore delighted that CRUK launched TRACERx EVO, a new programme that builds on the discoveries made in the world's largest long-term lung study, TRACERx. Our scientists contributed to the success of TRACERx and will continue to play a key role in TRACERx EVO. Alongside UCL colleagues Charles Swanton and Sergio Quezada, I will co-lead the international consortium, the critical mass necessary to drive another step change in the way we understand and treat lung cancer.

Another significant boost to health research in Manchester is the investment of a further £59.1 million in the Manchester Biomedical Research Centre. Cancer is a key theme within the BRC, and the new funding is critical to expanding our research and translating scientific discoveries into new treatments and diagnostic tests to help deliver our goal of a more personalised approach to caring for patients with cancer.

Now a regular feature, the selection of highlighted publications showcasing the Institute's research has been written by some of our early career researchers. You can read more about our recent progress in leukaemia, lung cancer and immunity-based therapy.

Cover Images: CRUK Manchester Institute Colloquium 2022. High content screening examines co-culture of pancreatic tumour cells and fibroblasts (a-SMA fibres stained red); Santiago engages the audience with his latest research; sharing data in a vibrant poster session.

Tim Somervaille presents his latest research at the Colloquium.

Our early career researchers are also enjoying connecting with members of the local community. It was wonderful to host school visits during Work Experience Week. This is an important engagement activity, helping to inspire the next generation of cancer researchers. So, I would like to thank our young researchers who took part for their involvement.

I wish to welcome all the new PhD students – you can find out more about them in this newsletter – and staff who joined us recently.

I also would like to recognise our PhD students who have recently passed their viva examination. Congratulations go to Alicia Conway, Hannah Reed, Zoe Lee, Jack Ashton, Ewan Selkirk, Sarah Craig, and Kostas Georgiadis. I wish them all the best in the next stage of their careers.

And finally, as construction of our new building nears completion, we're looking ahead to the new year and returning to our old site at the Christie NHS Foundation Trust. Detailed planning for the move from Alderley Park is progressing well and we anticipate this will take place in the Spring.

It will be fantastic to have everyone back together and I am excited about how this new facility will help to support and integrate our discovery and translational research and transform patient outcomes through advances in the prevention, early detection and treatment of cancer.

I wish you all a wonderful festive and restful break. I am looking forward to seeing you all in 2023 for what will be a momentous year for our Institute.

Professor Caroline Dive, CBE., FMedSci.
Interim Director, Cancer Research UK Manchester Institute

Thanks to the many sponsors who helped fund our Colloquium this year.

I'm a Scientist

I'm a Scientist – Get me out of here! is a free online event where school students get to meet and interact with scientists. Students challenge the scientists over intense, fast paced online live chats where they ask any questions they want and get to vote for their favourite scientist.

This activity reaches out to students from underserved schools who otherwise wouldn't get to meet people working in STEM.

In June, seven of our researchers from across the Institute participated in the 'Cancer Zone', alongside researchers from the Universities of Edinburgh, Oxford and the CRUK Beatson Institute.

We were involved in a huge 41 live chats, with opportunities to also answer students' questions in-between chat sessions. Two additional live chats took place to further teachers' professional development.

Our researchers were well-represented amongst those answering the most questions and attending the most chats. In all, over 600 answers were given to more than 180 unique questions!

The students were really keen to ask and learn all they could about cancer research, as well as to gather advice for their own career and education journeys.

> I believe that giving back and contributing to the community is extremely important for us as scientists. I found the 'I'm a Scientist – Get me out of here!' initiative very empowering for the students, and I loved the fact that I could nurture their curiosity whilst talking about research. I'd encourage anyone to get involved!
>
> Dr Maria Peiris-Pages,
> Cancer Biomarker Centre

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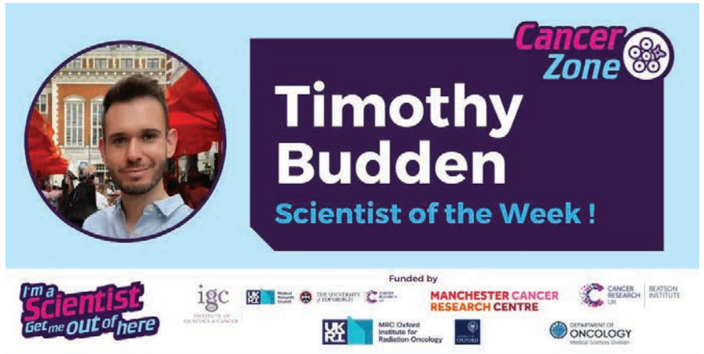
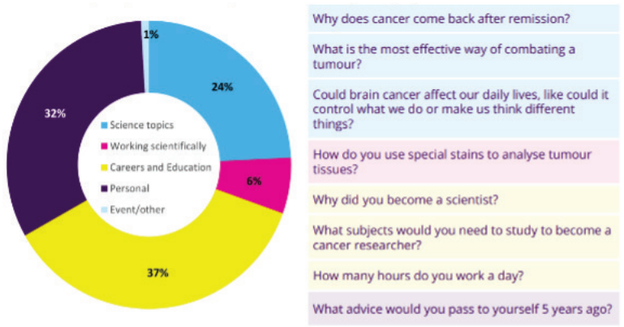
Students from **26** schools logged into the Cancer Zone, meeting with **34** researchers.

- **71%** of the students were from priority schools
- **47%** from widening participation schools
- **43%** from underserved schools



Tim Budden wins students' choice 'Scientist of the Week'.

Our researchers really enjoyed taking part and interacting with all the students. Special mention goes to postdoc Tim Budden, from our Skin Cancer and Aging group, who won "Scientist of the Week" in week 2 – as voted for by the students themselves!



Questions Asked. The pie chart shows an analysis of the questions that students sent to the scientists. Questions are coded into overarching categories; the examples are coloured by category.

Live Chats. The word cloud illustrates the topics students and scientists talked about in the live chats. The bigger the word, the more frequently it was used. As you can see, 'cell' was the most popular word!

FEEDBACK

In response to the event, one student said, "Thank you for answering my questions for today, I feel a lot more confident about a possible future in medicine now."

Another said, "Thank you guys for answering my questions and taking the time out of your day to reply to us so we can have knowledge. I hope to talk to you guys again soon."

The sessions were also well received by the teachers, with one saying, "Thank you very much for your time. The students enjoyed asking you questions and look forward to another session in the future."

Local Scout Group learn to extract DNA

Lynsey Priest enjoys being able to reach out to young people and engage them in STEM activities.

Many young people don't always get the opportunity to meet real scientists. So, it is important to engage with children in their communities if we are to inspire them to choose a career in science.

Lynsey, a scientific officer in the CRUK Manchester Institute Cancer Biomarker Centre, recently visited a local scout group to show them how much fun science can be.

The 3rd Macclesfield Upton Priory Scout Group had a great time learning how to extract DNA from fruit.

This is just one of the ways that members of the Institute go out into the community to inspire the next generation of cancer researchers.

3rd Macclesfield Upton Priory Scout Group learning how to extract DNA from fruit.

Cancer Revolution wins Best Exhibition

We are pleased to announce that at the Manchester Culture Awards 2022, the Science & Industry Museum won Best Exhibition for their ground-breaking exhibition Cancer Revolution: Science, Innovation & Hope, which was developed with people living with cancer.

Created by the Science Museum Group, the exhibition received support from expert partner Cancer Research UK and featured research from the CRUK Manchester Institute.

Cancer Revolution continues at the Science Museum in London until 29 January 2023.

CRUK Research Engagement Manager for North of England, Iqra Choudhry is amongst the team collecting the Best Exhibition award (third in from the right).

Work experience week

Our researchers took part in a "Work Experience Week" from Tuesday 27th September to Saturday 1st October, in a joint activity with the Cancer Research UK Beatson Institute in Glasgow.

We were thrilled to invite a number of schools to a work experience week organised across the two Institutes.

Researchers from both Institutes delivered six virtual sessions to schools across the Greater Manchester and Glasgow areas, as well as other parts of the UK.

And it was with great excitement that we were also able to host site visits for school students for the first time since 2020.

Students had the chance to see inside our laboratories, take part in quizzes, and ask researchers questions in real time during the virtual sessions – covering areas as diverse as histology, mathematics and bioinformatics, liquid biopsies, and fruit flies in research.

Several schools were then invited to visit the Beatson Institute in Glasgow, and the Oglesby Cancer Research Centre in Manchester to put the theory into practice.

'Starting in Science' Open Day

On Saturday 1st October, the MCRC had the pleasure of welcoming four schools from across Greater Manchester to a 'taster day', designed to bridge the gap between A-level studies and science as a career researcher.

Following a lecture on the importance of science and the role of research in improving cancer outcomes by Professor Stephen Taylor – from the Division of Cancer Sciences at The University of Manchester – the students headed into the labs to try out some new skills.

Several sessions, designed to align with the student's A-level curriculum, were led by scientific officer Steve Lyons from our Translational Oncogenomics team, alongside members of his laboratory and other scientists from the Institute, including Toni Banyard, head of our Flow Cytometry Core Facility. Students here learned why you used a FACS machine, how to mark and separate DNA, as well as visiting the hypoxia labs to explore the impact of gases in cells.

We also helped answer questions on careers in science, led by Michelle Greenhalgh, who explained her role in the MCRC Biobank, and Martin Swinton, Clinical Oncologist at the Christie NHS Foundation Trust.

We thought the whole work experience week was a fantastic success, and we look forward to seeing more future researchers from around the Greater Manchester area in our labs soon!

SCAN ME

Head of Flow Cytometry Toni Banyard explains fluorescence activated cell sorting (FACS) analysis to the students.

PhD student Parsa Parhady shows an A-level student how to use a pipette.

Virtual lab tours

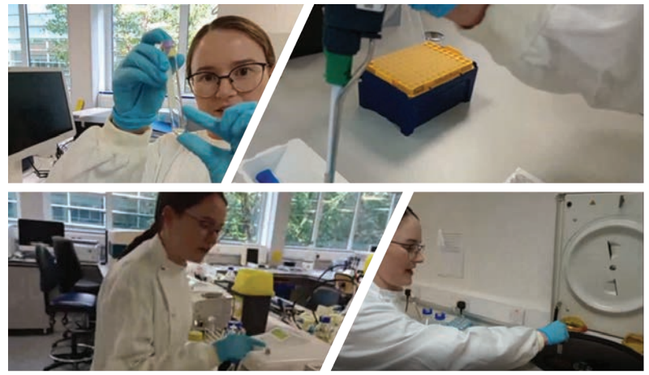
By Molly Glennister-Doyle, Scientific Officer, CRUK MI Cancer Biomarker Centre

Planning for the virtual sessions began back in early September, where scientists across the two CRUK Institutes – Manchester and Glasgow – came together to discuss how best to communicate their research to students in an interesting and engaging way.

Researchers working in similar areas teamed up to deliver a total of six sessions across a diverse range of topics including histology, mathematics and bioinformatics, liquid biopsies, and using fruit flies in research.

We designed the sessions to incorporate live and pre-recorded videos showing procedures in the lab and what a typical research space looks like, as well as presentations on how we became interested in science.

I prepared my presentation with Sophie Richardson, also from the Cancer Biomarker Centre, whose research focuses on detecting DNA and cytokines in blood samples – a process known as a liquid biopsy. We were two of 11 researchers who delivered virtual sessions during the work experience week.



Students were shown a live video tour of our labs with researchers demonstrating experiments.

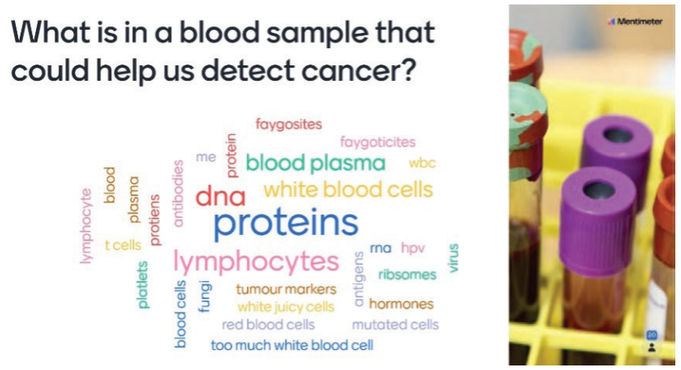
We started our session by introducing ourselves to the students – who were mostly in their A-level or Scottish Higher years – and explaining our journey into cancer research.

Next, Sophie did an excellent job of providing students with some background on liquid biopsies, including the benefits of taking a blood sample over a traditional biopsy, and what is in a blood sample that could help us detect cancer.

Using presentation software tool Mentimeter was a great way to engage our audience as it enabled us to encourage students to answer questions, using the word cloud and open-ended question features. We were very impressed by some of the answers they gave!

I was then able to give students a live video tour of our labs and demonstrate some of the techniques and equipment we use to collect, process and analyse blood samples. This included a demonstration of an example ELISA, which one teacher commented was very useful to see in practice as students were currently learning about this in class.

Finally, we allocated some time at the end of the session to allow students to ask us any questions and provide us with feedback.



Sophie Richardson explains how identifying the cells in a blood sample can help detect cancer.

Researcher in the lab.

Blood test paves way for early detection and personalised treatment options for patients with lung cancer

By **Joseph Alexandrou**, Senior Scientific Officer, CRUK Manchester Institute Cancer Biomarker Centre

SCAN ME

Researchers describe a non-invasive method for the early detection and monitoring of patients with rare forms of lung cancer.

Lung cancer is the leading cause of cancer death worldwide because of late-stage diagnosis and poor prognosis in half of all patients.

Small cell lung cancer (SCLC) is a less common but fast-growing form of the disease, associated mainly with smoking. Its treatment is particularly challenging because it spreads quickly in the body and becomes resistant to chemotherapy.

Since there are biologically distinct SCLC subtypes that could potentially respond differently to treatments, patients would significantly benefit from the early detection and tracking of their disease. The identification of the disease subtype would also open the avenue for personalised therapy.

Methylation of DNA is an important chemical modification which regulates gene expression, and an abnormal DNA methylation pattern can affect normal gene function and drive tumour development.

The team of researchers investigated how the methylation pattern of circulating cell-free DNA (cfDNA), isolated from patients' blood, can be utilised for SCLC early detection and subtype identification.

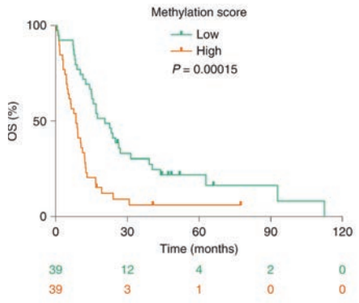
The researchers developed a robust method of DNA methylation profile analysis, revealing distinct differences between normal and diseased tissue. However, the key advantage of this method is the ability to distinguish between patients and healthy individuals, using tiny amounts of cfDNA (one billionth of a gram), isolated from blood.

Most importantly, this cfDNA methylation analysis emerged as a sensitive diagnostic tool for early-stage patients. Even the SCLC subtypes could be recognised by their distinct DNA methylation patterns. This is important because it can help clinicians choose the best treatment option for a patient.

The researchers also found that the level of cfDNA methylation, presented as a score, could accurately predict the disease stage and patient survival.

Overall, this study showed that analysing tiny amounts of DNA from blood – taken easily from a patient – can detect SCLC at an early stage and provide personalised more effective treatment options for patients. Larger clinical trials are required to confirm the clinical utility of these findings.

Chemi F, Pearce SP, Clipson A, Hill SM, Conway AM, Richardson SA, Kamieniecka K, Caeser R, White DJ, Mohan S, Foy V, Simpson KL, Galvin M, Frese KK, Priest L, Egger J, Kerr A, Massion PP, Poirier JT, Brady G, Blackhall F, Rothwell DG, Rudin CM, Dive C.
cfDNA methylome profiling for detection and subtyping of small cell lung cancers.
Nat Cancer. 2022 Oct;3(10):1260-1270. doi: 10.1038/s43018-022-00415-9.



Methylation score predicts survival in patients with SCLC.
Kaplan–Meier statistical analysis shows overall survival (OS) of the 78 patients with SCLC stratified by high and low methylation scores. Patients with low scores had significantly longer OS than patients with high scores. Overall, data indicate that cfDNA methylation profiling has potential clinical utility in SCLC by allowing sensitive blood-based tumour detection and providing prognostic information beyond clinical stage.

Researchers find blood test to guide therapy and improve survival in cancer patients

By **Izaak Reddy**, Scientific Officer, CRUK Manchester Institute Cancer Biomarker Centre

Scientists from Manchester and London have identified the first blood test that shows whether drugs used to stop tumours from growing their own blood vessels are working in patients receiving cancer therapy. This blood test could help tailor treatment for patients to prevent the spread of disease across multiple cancer types.

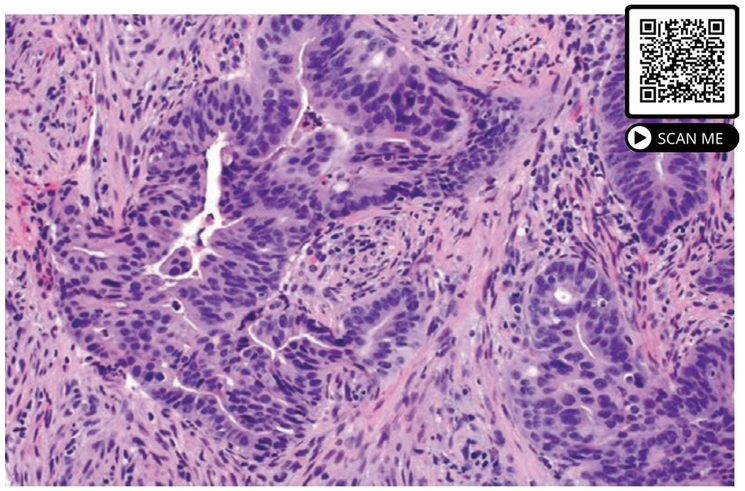
Tumours require a blood supply to provide nutrients and enable the spread of cancer to other organs. New blood vessel formation – angiogenesis – is controlled by a growth factor (similar to a hormone) called vascular endothelial growth factor or VEGF. Drugs that block VEGF (VEGFi) are used with conventional chemotherapy to prevent disease progression in a range of cancer types.

The benefits of this combined treatment are limited because it is not effective for every patient. These drugs can be somewhat harmful and expensive so there is a real need to find biomarkers that can reveal treatment effectiveness and thereby guide the best therapy for specific patients.

Previously, the team identified plasma Tie2 (pTie2) as a potential biomarker in patients treated with a combination of chemotherapy and bevacizumab, an anti-VEGF antibody. They measured the reduction in pTie2 levels and suggested a 'specific response criteria' could be used to identify whether the treatment was effective and worth continuing. Subsequent elevation of pTie2, from its reduced level, indicates diminishing treatment benefit and can be used to predict tumour progression.

Our scientists investigated pTie2 in different cancers – ovarian, colorectal and biliary tract – to reveal treatment effectiveness and to predict cancer progression in patients following combination treatment of chemotherapy and cediranib, another type of VEGFi.

Using statistical modelling, the team developed response criteria, where a 24% reduction in pTie2 levels following the first three cycles of treatment was categorised as a complete response. They found that patients who had a complete response had a significantly better overall survival by more than six months – a 50% improvement.



SCAN ME

Moderately differentiated colorectal adenocarcinoma (original magnification ×200).
Fleming M, Ravula S, Tatishchev SF, Wang HL. Colorectal carcinoma: Pathologic aspects. J Gastrointest Oncol 2012;3(3):153-173. doi: 10.3978/j.issn.2078-6891.2012.030. Reused under CC BY-NC-ND 4.0

The researchers could also anticipate disease progression in 61% of patients, 6 weeks before this would have been detected by radiology scans.

This important discovery shows pTie2 could be used as a predictive biomarker, allowing time to alter treatment weeks before progression is detected by radiology. This opens the door for clinicians to manage the use of VEGFi in combination with other types of cancer therapies in different cancers.

Zhou C, O'Connor J, Backen A, Valle JW, Bridgewater J, Dive C, Jayson GC.
Plasma Tie2 trajectories identify vascular response criteria for VEGF inhibitors across advanced biliary tract, colorectal and ovarian cancers.
ESMO Open. 2022 Apr;7(2):100417. doi: 10.1016/j.esmoop.2022.100417.

Adding a piece to the puzzle: improving the prediction of patient response to cancer immunotherapy

By **Gayatri Gulati**, Scientific Officer, CRUK Manchester Institute Cancer Biomarker Centre

SCAN ME

Is our immune system the answer to personalised medicine? Researchers in Manchester have found a potential way to use the immune system to predict patient response to anti-cancer drugs.

Normally, the immune system identifies foreign particles, microbes or any cells that do not express 'self' markers. Cancer cells are one step ahead and can evade immune detection by inactivating immune cells.

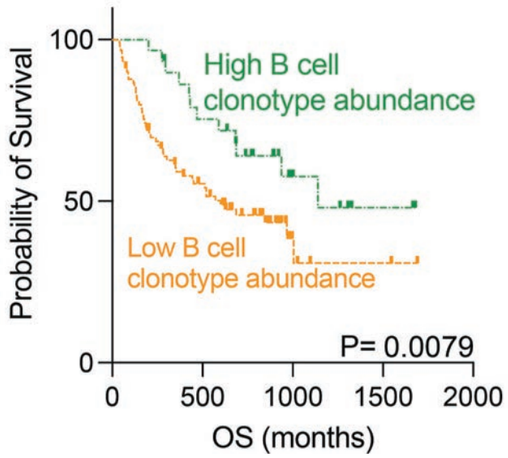
Immune system suppression mediated by cancer cell signalling can promote the growth and spread of a tumour.

This suppression can be reversed by immune checkpoint blockade drugs (ICB) which results in re-awakening of immune cells and helps target the cancer. These therapies have become a standard of care and revolutionised the treatment of skin cancer, especially in late-stage disease.

However, the biggest problem surrounding ICB are the side effects and the lack of prognostic markers that could help us predict long-term patient response to the drug. It is vital we identify new markers and confidently determine patient prognosis.

Researchers from the Molecular Oncology group at Cancer Research UK Manchester Institute investigated the prognostic potential of two components of the immune response – B-cells and CD14+ monocytes – in metastatic melanoma. CD14 is known to trigger immune responses and inflammation during infection.

Monocyte clusters were monitored per patient, before and after ICB therapy. The cluster of patients who responded to therapy were shown to have higher expression of genes associated with inflammation before treatment. Inflammation in cancer is a promising sign as it indicates that the immune system is showing an anti-cancer response.



Survival curves of 120 metastatic melanoma patients treated with immune checkpoint blockade drugs with high (green) or low (orange) pre-treatment tumour infiltrating lymphocyte/B cell receptor abundance show a favourable prognostic factor. (log-rank P = 0.025, median survival = 1139 versus 600 months).

Interestingly, the group of patients that showed disease progression had higher levels of RNA binding protein tristetraprolin, which inhibits inflammation and reduces intensity of the immune system's anti-cancer activity.

B-cells are interesting as they produce antibodies against 'foreign' antigens and communicate with T-cells to further activate the immune system. The team used a variety of techniques including single cell analysis and gene sequencing to uncover the potential role of B-cells in melanoma.

The researchers made two important discoveries. They found that a higher variety of different B-cell receptors that are used to recognise foreign molecules correlated with better patient survival outcomes and their results pointed towards anti-tumour effects mediated by B-cell signalling. Taken together, these findings suggest the study of B cells can lead to a prognostic marker for melanoma patients and to identify which patients should gain benefits from ICB that would outweigh the negative impact of side effects.

This study shows that harnessing the predictive power of both B-cells and CD14+ monocytes in melanoma and other cancers could pave the way for refining personalised medicine and improving patient survival.

Valpione S, Campana LG, Weightman J, Salih Z, Galvani E, Mundra PA, De Rosa F, Gupta A, Serra-Bellver P, Lorigan P, Germetaki T, Dynowski M, Kitcatt S, Sahoo S, Lee D, Dhomen N, Lord G, Marais R.
Tumour infiltrating B cells discriminate checkpoint blockade-induced responses. *Eur J Cancer. 2022* Dec;177:164-174. doi: 10.1016/j.ejca.2022.09.022.

Scientists reveal new protein-chromatin interactions behind leukaemia cell differentiation block

By James Norris, Senior Chemist, Cell Division

The Somervaille lab has provided novel insight into protein interactions on chromatin and how this causes the cell differentiation block seen in Acute Myeloid Leukaemia (AML).

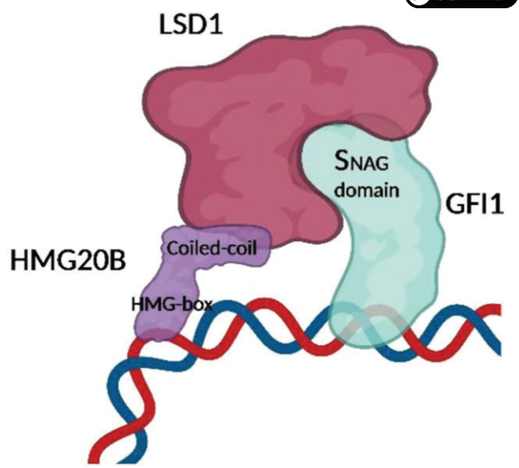
Even though AML is classed as a rare type of cancer, the NHS estimates around 3100 people a year are diagnosed with this quick and aggressive leukaemia. According to CRUK, the incidence rate of AML has increased by 20% since the early 1990s but has plateaued recently.

Lysine specific demethylase 1A (LSD1) is known to form many interactions with binding partners on chromatin. LSD1 has amassed much interest in AML research due to high expression levels in this cancer.

Growth Factor Independent 1 (GFI1), required for normal and leukaemic haematopoiesis, is known to interact with LSD1. However, how these proteins are recruited to chromatin and the interactions they form with one another remain elusive.

The team revealed a novel interaction between HMG20B (High Mobility Group 20B) protein and LSD1 by observing that LSD1 inhibitors destabilised this interaction. The finding that HMG20B knockdown gave the same result as inhibiting LSD1 backed up their discovery that these two proteins function together.

SCAN ME



The proposed interactions of proteins studied and their recruitment to chromatin.

Further experiments told the researchers that HMG20B stabilised the sequence specific binding of GFI1 and LSD1, and that the three acted together as a repressive complex on chromatin.

The team were able to prove that HMG20B stabilised the physical interaction on chromatin of LSD1 with GFI1 through HMG20B depletion studies.

Finally, researchers were able to highlight a previously unknown role that HMG20B plays in leukaemia. With HMG20B knockdown, genes which promoted leukaemia stem cell maintenance where reduced. Conversely, genes which reduced leukaemia stem cell activity were promoted.

Overall, the team has revealed a new genome-wide interaction between the studied HMG-box protein with LSD1 and GFI1. This research teaches the scientific community more about the underpinning mechanisms behind AML and gives weight behind using of LSD1 inhibitors in the studies of AML and their presence in clinical trials.

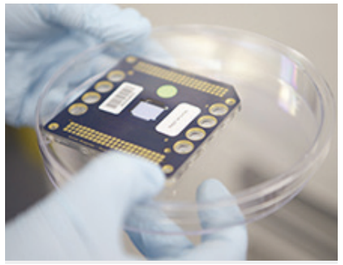
Maiques-Diaz A, Nicosia L, Basma NJ, Romero-Camarero I, Camera F, Spencer GJ, Amaral FMR, Simeoni F, Wingelhofer B, Williamson AJK, Pierce A, Whetton AD, Somervaille TCP.
HMG20B stabilizes association of LSD1 with GFI1 on chromatin to confer transcription repression and leukemia cell differentiation block. *Oncogene. 2022* Oct;41(44):4841-4854. doi: 10.1038/s41388-022-02471-y.

Meet our new Cancer Biomarker Centre Deputy Director

Dominic Rothwell has just been appointed as the new Deputy Director of the CRUK Manchester Institute Cancer Biomarker Centre (CBC). Having worked in the Institute as a molecular biology researcher, and then more recently as head of the Nucleic Acids Biomarker team in CBC, he's well placed to support the expansion of the Centre in the coming years.

As a lab-based researcher, Dominic put his skills to work investigating the use of blood-based biomarkers for detecting and diagnosing cancer. These 'liquid biopsies' have many advantages over traditional biopsies, which involve taking tumour samples from patients during surgery. Liquid biopsies are much less invasive – involving a standard blood test – and can therefore be taken multiple times, capturing the effects of treatment on a tumour.

They can also be used for cancers where surgery is rarely used to treat patients. One example is small cell lung cancer (SCLC), which makes up about 15% of lung cancer cases. Patients tend to be diagnosed once the disease has already spread, and typically doctors do not take biopsies of the patient's tumour as they are not treated with surgery.



Analysing liquid biopsies

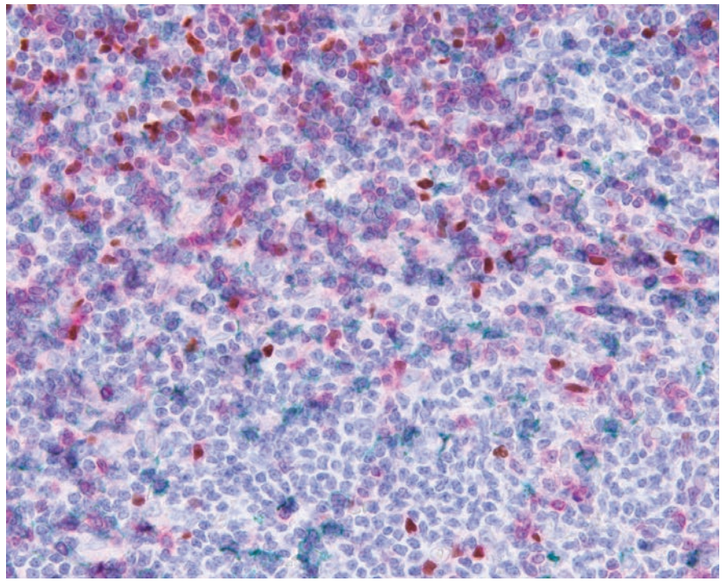
One biomarker the team study is cancer DNA itself. Cancer cells release some of their DNA into the bloodstream, and these tiny amounts of DNA can be detected and read using extremely sensitive assays. DNA is like an instruction manual for the cell, and cancer cells contain wrong instructions, called mutations. Detecting the presence of these mutations in DNA from the blood of patients can be used to spot patients with cancer.

It is this kind of work that has the potential to directly benefit patients that Dominic is looking to expand on in his new role. He says, "from TARGET (the clinical trial) we use cell-free DNA as a tumour biomarker that we could use to follow the tumour burden (the amount of cancer in a patient's body). This gives us a one-dimensional aspect of what was happening in the patients. But now we're doing 'multi-omics' research, and in particular we are focusing on a method called methylation."

If the DNA is like the text of an instruction manual, methylation can be thought of as the formatting added to help that text be read properly – like adding bold, italic or underlining for emphasis.

Dominic's team have shown that blood samples can be used not only to detect SCLC in patients, but also to identify which specific variant of SCLC each patient has, giving the potential for them to be treated in a much more targeted and personalised way. Dominic goes on to explain, "the exciting part is that not only can you sensitively detect and follow the tumour, but you could do this molecular characterisation into the different subtypes. The idea is to stratify patients for therapeutic vulnerabilities (the best treatment for their specific cancer) from blood-based biomarkers, and now we are moving this work into the clinic."

As well as detecting and characterising these lung cancers, the team are using



Histological image showing lung cancer cells.

the same techniques to help patients who have a rare form of cancer called CUP – or cancer of unknown primary. These patients present with cancer which has spread around the body, but where it is unclear what the source of the cancer is. This makes it very challenging to treat them, as it is not clear which drugs or other treatments they will need. The team are working to use blood samples to identify the source of the tumours and direct the patients to the most appropriate care and the right clinical trials.

Dominic's background as an experimental scientist means he's interested in how these tools can be expanded to solve problems in other types of cancer. As well as supervising the steps needed to take this existing work into the clinic, he's keen to be developing and discovering new approaches.

In his new role as Deputy Director, Dominic will be involved with the development and expansion of the CBC over the coming years. Dominic said, "The Biomarker Centre is going to be much bigger than a normal lab, probably around 120 people and we're set to build collaborations across the entire national network of trials. That's the other thing that the deputy director role gives me, the ability to drive things forward and influence this transition into the more translational and clinical side of what we do."

The team have done extensive work in Manchester and across the North of England, including expanding the Target trial from a feasibility stage with 100 patients to a much larger trial of over 6,000 patients. They aim to use the same approaches to expand their existing projects across the rest of the country. It is this collaborative working style that Dominic has enjoyed in his time at the Institute, and one he is keen to maintain as they work with other groups across the country.

"A lot of the successful work we've done over the last 10 years has really been down to team science. I think it really has been one of the things I've liked most about the evolution of science during my time here. It used to be much more insular, and you kept things secret until you were able to publish them. Nowadays I think it's much more productive and efficient to have collaborative team science approaches."

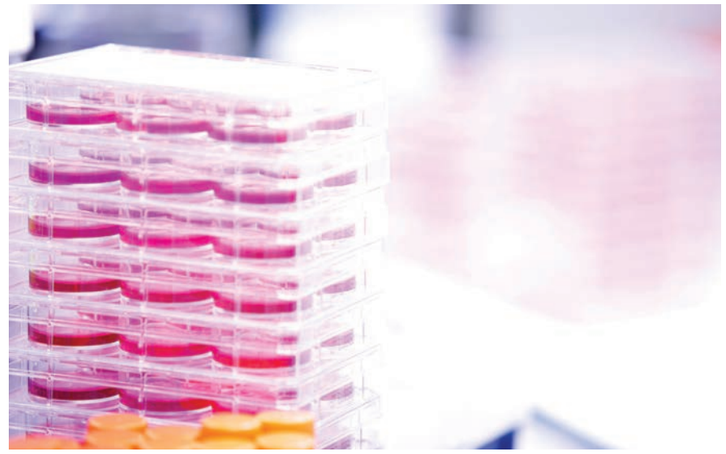
These collaborations between individuals, groups and institutions are essential for the type of work happening in CBC, which is often very complicated as research of this kind requires substantial inputs of time and money in the development of these important new clinical tools.

"The only way you can really do this is through team science and you've got to because it's complicated and sample sizes have got to be larger. It takes all that to be able to get things done in an efficient and time productive way. So, you have to collaborate, which is great. And I really do enjoy that."

Dominic's first task as Deputy Director will be to find a replacement for himself as the lead of the NAB Team. Alongside that he will be taking on a greater management role, helping secure funding and collaborations, and driving forward the vision for the Cancer Biomarker Centre. All of this will be directed at his passion of seeing the work they do make a difference to the lives of patients. "I did a couple of postdocs, so I was a biologist from the start, but began to move into more translational research quite early on. That's the bit I really like, moving the science into the clinic is what really excites and motivates me", concludes Dominic.

It will be an exciting time and we look forward to hearing about the collaborations and new developments from Dominic and the rest of the team in the next few years.

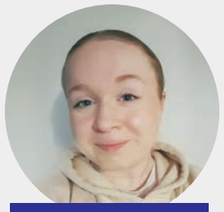
"I've always been rather tumour agnostic – I see myself as a molecular biologist rather than a small cell lung cancer biologist specifically. So, it's the technology and the toolbox that we've developed which is where our strength is as a biomarker centre. Whatever the tumour type is, we ask what capabilities we've got to investigate it. Another approach is speaking to clinicians to find out what's missing, and then asking, 'Can we fill that gap?' Have we got something already or do we need to develop something new?"



EDUCATIONAL NEWS

Meet the new students

We welcome six new PhD students and three clinical research fellows to the Institute this year. Many of them enjoyed an inauguration to CRUK MI during our Colloquium – reported on later in the newsletter – where they received a fun and comprehensive introduction to their new peers and colleagues.



Hannah Sheedy

My name is Hannah, and I am from Manchester. Before starting here at the CRUK Manchester Institute, I completed my undergraduate degree in Medical Sciences at the University of Leeds, with in an industrial year at CSI West Yorkshire Police (fighting crime with science!), although this was never my passion and I have always wanted a career in cancer research.

My final year project at university was focused on cancer, where I investigated how RANK signalling influences the phenotype of cells from prostate carcinoma bone metastasis. Now, I have taken what feels like a very big jump and I am the new PhD student in the Nucleic Acids Biomarker team in the Cancer Biomarker Centre, and the focus of my research will be on the development of liquid biopsies to follow tumour evolution in early-stage non-small cell lung cancer. Outside of this, I love to keep my body moving, especially through the form of dance, and I have done Ballroom and Latin dancing for many years, but nowadays only have time to attend casual Zumba sessions!

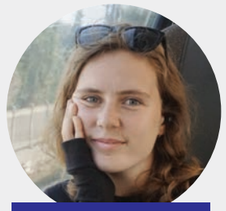
Ana Ortega-Franco

Hello, my name is Ana and I am from Barcelona, where I studied medicine and trained in medical oncology. I moved to the UK more than 4 years ago where I have worked as a senior clinical fellow in lung cancer and early phase clinical trials at The Christie NHS Foundation Trust.

My PhD project is on methylation profiling of circulating free DNA in small cell lung cancer to sub classify patients, elucidate mechanism of treatment resistance and find new treatment vulnerabilities. I am based in the Nucleic Acids Biomarker team within the Cancer Biomarker Centre. In my free time, I enjoy practicing yoga and cooking at the weekend with a glass of wine. One of the things I like the most about Manchester is the electronic music scene and industrial heritage. And I am 'addicted' to podcasts on philosophy, politics and true crime! (I know, a weird mix).

Lucy Barton

Hi, I'm Lucy and I am originally from Brighton. I travelled north to study Biochemistry at the University of Leeds and also undertook an industrial placement year in Hull. My final year modules sparked my interest in cancer research, so I continued even further north to complete a Master of Cancer Studies at Newcastle University. During my time there, I worked on a project looking at the role of androgen signalling in endometrial cancer. I have now joined the Translational Oncogenomics group led by Rob Bristow and my project will look at chromosomal gains in relation to prostate cancer aggression, using molecular pathology approaches and spatial omics. During my free time I enjoy cooking and baking, especially after a long stressful day. I also enjoy swimming and going on long walks, so I am very excited to explore the Peak District during my time in Manchester.



Bethan Williams

Hi, I am Bethan and am excited to be starting a PhD in Professor Caroline Dive's Cancer Biomarker Centre in January. More specifically, my project will be in the Preclinical Pharmacology team led by Dr Kathryn Simpson and focuses on defining the mechanisms of small cell lung cancer metastasis.

Before heading to the CRUK Manchester Institute, I read Natural Science at Cambridge, focussing on Pathology in my final year. Outside of the lab, I am a keen climber and outdoor go-er and have been travelling around Europe in a van since graduating. I have had some great adventures in the mountains but am looking forward to beginning my PhD here and, personally, I am excited to be moving somewhere that's not as flat as Cambridge!

Diego Sanchez Martinez

Hello, I am Diego Sanchez Martinez, and I was born and raised in Paraguay, a landlocked country often depicted as the heart of South America. I moved to the UK with my family to work as a Clinical Research Fellow in Professor Robert Bristow's lab during my PhD, with the aim of unravelling the molecular and evolutionary pathways involved in HPV-related penile cancers. Before joining the CRUK MI, I obtained my medical degree and completed my specialisation in surgical pathology in Paraguay.

I have researched penile cancer in Dr Antonio Cubilla's group – who devised the latest WHO classification on this cancer – under his mentorship since I was a medical resident. In 2017, I received a scholarship from my home country to pursue a Master of Science in Bioinformatics at Johns Hopkins University, where I collaborated on researching long non-coding RNA in human cancers under the mentorship of Dr Luigi Marchionni. Outside the lab, I enjoy playing with my children, sightseeing, and travelling. Also, I would like to learn and experience as much as I can from the way of living in the UK.

Kimberley Hockenhull

Hi, I am Kimberley, and I am born and raised here in Manchester. I initially studied for a joint Honours BSc in Medical Microbiology and Genetics at the University of Leeds, after which I decided I wanted to pursue a career in Medicine and so went on to study further at The University of Manchester, obtaining my degree in 2013.

I have been working in the NHS in the Northwest as a clinician for the last 9 ½ years and am currently approaching my last year of training in Medical Oncology at The Christie NHS Foundation Trust before becoming a consultant. I am excited to be joining Santiago Zelenay's Cancer Inflammation and Immunity group at CRUK MI to undertake a PhD investigating how the tumour microenvironment can influence or even predict how patients respond to immunotherapy, and additionally how this could potentially be manipulated to improve responses and limit toxicity in our cancer patients. I am honoured to be a part of the amazing work at the Institute and to bring together clinicians and scientists in collaboration to ensure our patients receive cutting edge treatments and clinical trials. Outside of work, I enjoy spending family time with my husband and daughter and getting fresh air in the countryside walking my dog, a beagle called Clark.

Florentia Mousoullou

Hello, I am Florentia, and I am from a small but very sunny island, called Cyprus. You might be wondering, how did I end up here? Well, that's simple. I set my goals high, and I don't stop till I get there. My goal is for my research findings to improve the life of at least one cancer patient.

My journey began at the University of Lancaster where I completed my undergraduate degree in Biomedicine and undertook a research project on uveal melanoma. My strong desire for research led me to Imperial College London and the Francis Crick Institute, where I graduated with an MRes in Cancer Biology. I have undertaken two research projects where I had the chance to gain experience in both basic and translational biology, and it was during that time my enthusiasm for cancer research grew even more. My love and passion for research, my determination for always wanting to learn more, and fulfilling my goal, led me to this new and exciting opportunity as a PhD student here at the CRUK Manchester Institute. I am delighted to be the first PhD student in Dr Mark William's lab, focusing on inducing leukaemic differentiation to prevent post-transplant relapse in patients with Acute Myeloid Leukaemia. My research addresses a critical clinical question and is likely to inspire clinical trials that reposition investigational AML compounds for use at post-transplant relapse. Outside the lab, I enjoy playing football, travelling, painting and I love cooking. As I am new to Manchester, I look forward to exploring the city and taking advantage of everything it has to offer.

Ellie Rees

Hi! My name is Ellie Rees, and I am from Colchester in Essex, which is the oldest recorded town in Britain. I studied at the University of Essex for both my bachelor's and master's degrees. After completing my master's, I worked for a couple of years as a research assistant in multiple different teams. My most recent job before joining the Institute involved investigating the use of oncolytic viruses as a therapeutic strategy in ovarian cancer.

I am thrilled to have joined the Cells and Proteins team, where I will be working on tumour infiltrating lymphocytes in melanoma. The project will investigate the tumour landscape and how immune cells are spatially interacting with one another to understand why some patients relapse. We then wish to analyse peripheral blood mononuclear cells (PBMCs) from peripheral blood samples to determine whether changes in T-cell methylation can be used as an early indicator of relapse before it is clinically detectable. In my spare time, I enjoy going for walks and I am keen to explore this side of the country. I also enjoy watercolour painting, cooking and baking. I would like to start getting fit by playing tennis and running (although I may just end up running to the fridge more often). I am looking forward to meeting you all!

Federica Spaggiari

Hello everyone! I'm Federica Spaggiari and I'm originally from Modena, a beautiful city in the north of Italy that you may have heard about for our wonderful balsamic vinegar. I have recently joined the Pre-Clinical Pharmacology team in the Cancer Biomarker Centre to start my PhD. During my time here I will focus on understanding how small cell lung cancer acquires resistance to chemotherapy in order to inform future treatment that can prevent and overcome this phenomenon.

I completed my undergraduate degree in Biotechnology in Modena and in 2021 I moved to London to study an MRes in Translational Cancer Medicine at King's College London. There I carried out two six-month-long research projects during which I investigated the molecular mechanisms of oesophageal adenocarcinoma progression and strategies to optimise CAR T-cell therapy delivery in solid tumours. It has been a challenging but enriching programme as I had a first-hand experience of what being a researcher means and it motivated me to continue my journey in academia by pursuing a PhD. Outside of the lab, I enjoy playing tennis, reading and hanging out with my friends here or video calling those from home. If I have more time, I'm always ready to pack a backpack and go for a hike. I'm really excited and grateful to have the opportunity to start my PhD at CRUK MI and I am looking forward to working towards understanding more about cancer and developing new ways to tackle it together with the other amazing researchers in the Institute.

Institute scientists reunite for Colloquium 2022

The annual CRUK Manchester Institute Colloquium took place in person for the first time since 2019. Everyone was excited and happy to finally have the opportunity for this much-need get together for the whole Institute.

Assembling on site at the Alderley Park Conference Centre, we heard the latest research from our group leaders and second year PhD students, as well as viewing poster presentations from a range of scientists across the Institute, covering all aspects of cancer research.

Opening the Colloquium, Institute Director Caroline Dive gave a warm welcome to everyone and set the scene for the event over the science-packed two days.

There were a variety of interesting talks on both fundamental and translational research from our Group Leaders and Institute Fellows. We heard excellent presentations from our second year PhD students, and everyone was greatly impressed with their professionalism and enthusiasm.

We also welcomed to the event Evangelos Giampazolias, currently based at the Francis Crick Institute in London, who will be joining us in January 2023 as a new Junior Group Leader. He gave a fascinating overview of his research on how we can harness our immune system as a natural host defence mechanism to cancer, specifically how gut-resident microbes modulate immune responses in the tumour microenvironment and how that knowledge can help discover novel strategies for therapeutic intervention. We look forward to his arrival at the Institute in the New Year.

Our experience with hosting virtual and now hybrid events has enabled us to diversify the programme and invite external guests. Since the alumni session had been so successful over the past two virtual colloquiums, we decided to include it again in our programme this year and reconnect with former colleagues to discover where a PhD or postdoctoral position at the CRUK MI can lead.

Interim Director Caroline Dive opens the 2022 Manchester Institute Colloquium.

Selected poster presenters get ready to pitch.

Over video link we heard from former CBC postdoc Stuart Williamson, who described his transition into working for pharmaceutical company AstraZeneca and how he enjoys the interdisciplinary nature of his oncology projects. Of note, he also remarked that a move into industry does not close the door on academia and that the two sectors are now more fluid, enabling scientists to move back to academic research.

Suppliers A Go-Go sponsor colloquium

This year the Colloquium was sponsored by 'Suppliers A Go-Go' – a concept created by Purchase Officer David Jenkins in the Institute's Finance team to bring together our scientists and laboratory equipment suppliers.

David invited around 25 of our most popular suppliers to exhibit alongside our own poster session. Their funds went a long way to offset the costs of the colloquium and provided a great convivial atmosphere that added to an energetic and vibrant poster exhibition. We would like to thank our sponsors for supporting our colloquium and David for all his hard work in securing the exhibitors.

Congratulations to the poster prize winners L-R Bettina, Melissa with Caroline Dive, John with Caroline.

Also joining us online was Amy McCarthy, a former PhD student in the Systems Oncology group. She talked about developing an interest in one aspect of her PhD project – bioinformatics – and how she advanced her skills in that area to pursue it as a career. Amy is now a Senior Computational Biologist at e-Therapeutics, a biotech company specialising in computational drug discovery. Using her less conventional career path as an example – starting at AutoTrader as a Data Analyst – she advised that any experience is valuable and not to be scared to try something different. We would like to thank them both for their helpful career insights and frank discussions.

Keeping another element originally designed for our virtual meetings, several pre-selected 'elevator pitches' preceded the poster sessions, where the authors each gave a 90-second pitch on their poster.

When it came to our poster sessions, it became clear how much we had missed sharing our science with colleagues. The event was animated as our researchers stood by their posters and discussed their projects. As the first event held in the Conference Centre since the COVID-19 pandemic, even the staff remarked how wonderful it was again to hear the clamour of a scientific conference in full swing.

As always, the quality of the posters was outstanding, and it made hard work for the panel of judges to choose the winners of the two prizes. The Lizzy Hitchman Prize for the best poster by a PhD student was awarded to clinical fellow, Melissa Frizziero from the Cancer Biomarker Centre for her project on preclinical models to inform treatment opportunities for patients with extra-pulmonary neuroendocrine carcinoma, a rare and lethal disease.

The Best Poster Prize for a postdoctoral scientist went to Bettina Wingelhofer of the Leukaemia Biology group for her outstanding work on the role of the enhancer landscape in acute myeloid leukaemia.

There was also a prize for Best Elevator Pitch, which went to John Weightman of the Molecular Biology Core for his speedy introduction on how he can support researchers with their spatial transcriptomics analysis using 10X Genomics Visium technology. Well done everyone!

And finally, it would not be a colloquium without the socialising element. We held our evening social at the Metropolitan in Didsbury, where we chatted about the highlights of the event and caught up with our colleagues over food while enjoying some competitive fun with quizzes and games.

The event was a huge success and from the volume of excited and intense conversation it was clear that everyone thoroughly enjoyed discussing their science and had missed these important interactions over the past few years. It was wonderful to interact with each other during the three days and meet with our new intake of students.

We are looking forward to doing it all again next year at a new location.

It was great to catch up with former colleagues Stuart and Amy.

PhD student Maria Koufaki impresses the audience with her second-year talk.

Equality Diversity and Inclusion at the Institute

By Laura Jones, Human Resources Partner and EDI Strategic Steering Committee Coordinator
Human Resources, CRUK MI

The Institute has recently launched an action plan to reflect its commitment to Equality Diversity and Inclusion (EDI) at the Institute and within our local community.

As an Institute, we have a vision and commitment to create a diverse and inclusive culture which develops, attracts, and maintains a positive environment for staff and students whilst achieving the Institute's aim to deliver world class cancer research.

The Institute has established an EDI Strategic Steering Committee and EDI Subcommittee who are actively working through the five commitments.

The Strategic Steering Committee provides leadership, drive and strategic direction on equality, diversity, and inclusion across all parts of the Institute.

Both committees aim to promote cultural change and ensure that the EDI action plan is embedded across all functions of the Institute.

It is important to recognise that we all have part to play in these EDI initiatives, and that everyone should engage in EDI at the Institute.

We will soon be recruiting EDI Champions at the Institute – representatives are sought from staff and students – and we hope that everyone will support the Institute with these initiatives.

Committee members also presented a poster at the CRUK MI Colloquium, highlighting our aims and visions for EDI at the Institute to our staff and students. I enjoyed listening to everyone's comments and the feedback has been discussed by the EDI committees and will be interlinked into our plans.

We plan to approach this vision through five aims:

1. **» EDI Awareness and Training Provisions**
   To ensure that the profile of EDI is promoted within the Institute and beyond, and that staff and students understand their responsibilities regarding EDI.

2. **» Recruitment Practices and Opportunities**
   To ensure that the Institute recruitment practices adhere to and promote EDI.

3. **» Career Support and Development**
   To enable all staff (research and support) to reach their full potential within the Institute regardless of their protected characteristics.

4. **» Local Engagement**
   To ensure that the Institute engages with local schools to promote opportunities within STEM.

5. **» Data Collection – Transparency, Evidence, and Improvement**
   To analyse data to develop an evidence-based approach to drive change/improvements.

EDI poster sparked interest at the colloquium.

Your views

SCAN ME

We are always looking to hear from staff and students on their views and thoughts on EDI within the Institute and we would welcome any feedback/suggestions; if you have any thoughts or suggestions then please email me at **Laura.Jones@cruk.manchester.ac.uk** or complete the feedback from via the following QR code.

If you would be interested in becoming an EDI champion (staff or student) at the Institute, please contact me and we can discuss this further.

Paterson Redevelopment Project: creating inspiring spaces

As part of the Paterson Redevelopment Project (PRP), we have the opportunity not only to create inspirational laboratory spaces suitable for the developing research requirement but also to create motivating spaces for office areas and thoroughfares.

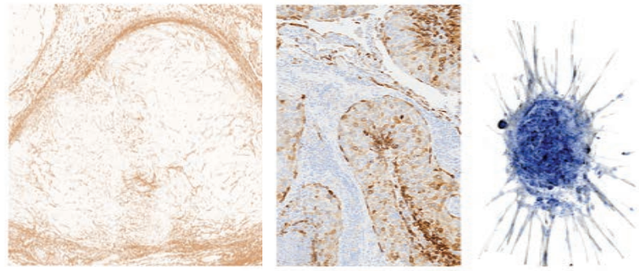
In collaboration with the architects, an opportunity arose to create spaces where scientific images can be displayed near the lift foyers.

After discussing the possibility with our researchers, images have been submitted to the design team which will be printed onto the walls near the lift spaces.

These images will demonstrate the breadth of research that is being undertaken whilst creating a stimulating visual backdrop where inspired visitors may wish to take their own photographs.

Near the images will be a barcode directing people to a website with information about the data.

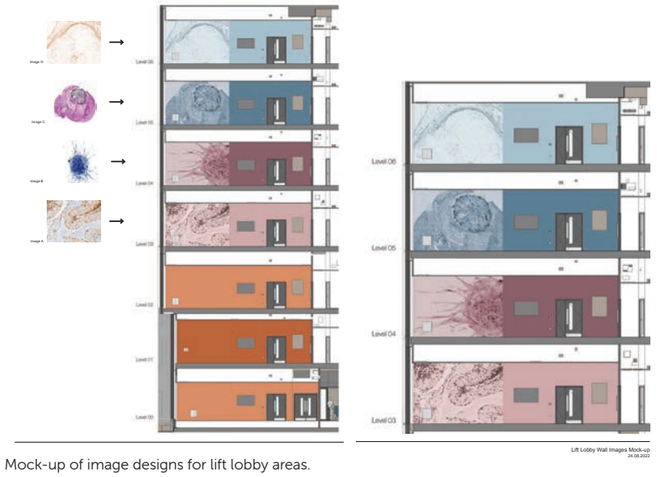
As the PRP develops, there will be further opportunities for the display of research images on screens so visitors to the new laboratories will be able to experience the research outputs from the groups.



Branding opportunities
INSPIRED BY SCIENCE & ART

Branding opportunities: making connections between health, medicine, life and art. Images: left shows collagen network in a pancreatic tumour, supplied by Carol McMenemy from Systems Oncology; centre shows lung squamous cell carcinoma, supplied by Victoria Fife from the Cancer Biomarker Centre; right shows invading U2OS osteosarcoma cells, supplied by Andrew Porter.

Matching lung cancer image (credit: Victoria Fife, CBC) with colour palette.



Mock-up of image designs for lift lobby areas.

Cancer Research UK Trustees Visit to Manchester

The CRUK Trustees visited Manchester in early October to hear about our latest progress and plans for the future.

The charity is governed by a Council of Trustees, led by the Chair Professor Sir Leszek Borysiewicz, the role of which is to set the Charity's strategic direction and oversee the delivery of its objectives.

The trustees enjoyed a tour of the new research centre replacing the Paterson Building that is due to be completed early in 2023 and which will form the main base for the Institute.

CRUK MI Group Leaders Claus Jorgensen and Santiago Zelenay presented research updates from their groups and several of our young scientists presented posters describing their PhD or postdoctoral projects.

Interim CRUK MI Director Caroline Dive gave an overview of the Institute, including the opportunities that the new building will provide, and MCRC Director Rob Bristow explained the wider Manchester research ecosystem and how the Institute and CRUK Manchester Centre sit at the heart of this.

The trustees greatly enjoyed their visit and were incredibly impressed by all of the research programmes and projects that they heard about.

Manchester Conferences

Greater Manchester Cancer Conference 2022

Greater Manchester Cancer Conference 2022

The Greater Manchester Cancer Conference took place over two days in October and featured a range of speakers talking about this year's themes of 'collaboration – equality – innovation', and how together these important strategies help us improve the lives of people affected by cancer in Greater Manchester and beyond.

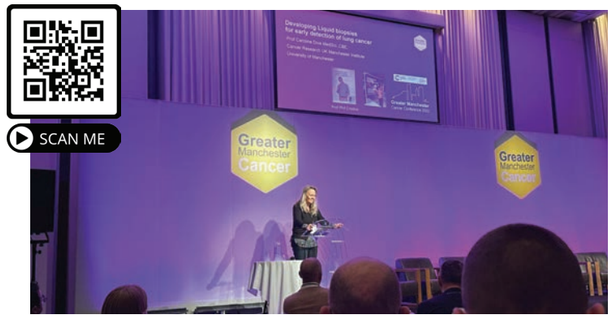
The event is organised by the Greater Manchester Cancer Alliance, one of 21 Cancer Alliances across NHS England, who aim to improve the lives of people affected by cancer in Greater Manchester.

Working in collaboration with organisations across the region – including the CRUK Manchester Institute, the Manchester Cancer Research Centre, and the Christie NHS Foundation Trust – they help people get diagnosed earlier, provide better treatment and support people to live well with and beyond cancer.

Under the umbrella of 'Innovation in Screening', Caroline Dive – Director of the CRUK MI Cancer Biomarker Centre – kicked off the session with an overview of her vital work developing liquid biopsies for the early detection of lung cancer. She concluded that "the very best place to work in research to improve early detection of cancer in the world is in Manchester".

Reducing inequalities in health care across Greater Manchester is also an important priority for the alliance. Our own digital Experimental Cancer Medicine Team – part of the CRUK Manchester Institute Cancer Biomarker Centre – presented their progress on employing digital technologies in clinical trials to ensure that technologically-enabled healthcare pathways are inclusive to all through patient empowerment.

We are delighted to announce that the team were recognised for their project encouraging inclusivity in technology clinical trials. You can read more about their award further on in the newsletter.



Caroline Dive gives an overview on liquid biopsies for the early detection of lung cancer.

CRUK Lung Cancer Conference 2022

Caroline Dive giving an overview of the CRUK Lung Cancer Centre of Excellence since it was established over 7 years ago.

The Lung Cancer Conference with the CRUK Lung Cancer Centre of Excellence returned for an in-person event in November, bringing the lung cancer community together again.

Held in Manchester over three days, the event was a resounding success, stimulating the audience with scientific talks, 91 posters and networking opportunities.

Packed with thought-provoking sessions for all scientific disciplines relevant to lung cancer, delegates heard the latest in early detection, lung cancer in never smokers, immune regulation and exploitation, and how to involve patients in research design.

Lung Cancer Centre of Excellence Co-Directors, Caroline Dive and Charles Swanton, opened the 3rd CRUK Lung Cancer Conference on 15 November to an excited audience.

"A greater understanding of the biology is the top emerging challenge given progress in lung cancer early detection."

57% of the audience believe this is the biggest challenge when asked the question

Many of our lung cancer researchers attended and presented talks and posters or chaired sessions. Everyone was eager to finally be able to get together to discuss and debate the latest data in lung cancer biology.

Maria Peiris-Pages talking at the Future Leaders Showcase.

Simon Pearce presents work on a new ctDNA methylation-based blood test.

We were delighted that so many of our early career researchers presented at the conference.

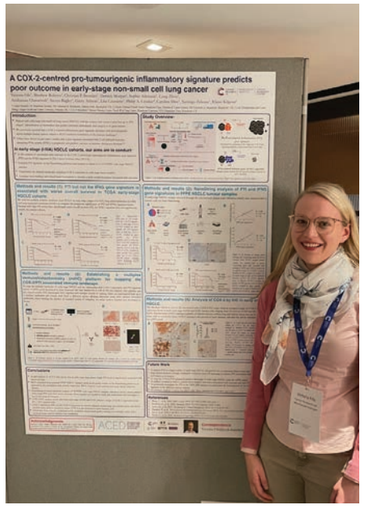
Maria Peiris-Pages from the CRUK Manchester Institute Cancer Biomarker Centre gave a talk at the Future Leaders Showcase session, where she discussed her preclinical work studying the metastatic cascade to the brain in small cell lung cancer and how she is building an atlas of genes and pathways to address brain metastasis in this disease.

The biology and aggressiveness of small cell lung cancer has limited the availability of patient tumour samples to use for discovery research and PhD student Oliver Bartley explained in his presentation how he uses CDX models to investigate this disease.

Simon Pearce from the CBC revealed the bioinformatic wizardry behind the team's recent Nature Cancer paper where they demonstrate the potential clinical utility of a new ctDNA methylation-based blood test which enables detection, monitoring and sub-typing of small cell lung cancer.

Another author on this significant cfDNA methylation publication, Alex Clipson from the NAB Team, presented some of the data in a poster.

Several other members of CBC also presented a poster, including Derrick Morgan and Mitchell Revill from the Tissue Biomarkers Team, who showcased transcription factor subtypes in clinical SCLC samples.



Victoria Fife and her winning poster.

And congratulations to our researchers who were awarded poster prizes. Well done to PhD student Victoria Fife for her poster on developing a multi-modal biomarker to predict survival of patients with early-stage non-small cell lung cancer, and to Scientific Officer Rebecca Carroll for her poster on the role of YAP1 in SCLC metastasis and chemoresistance.

The meeting ended on a high with a special Conference Dinner at the Museum of Science and Industry in Manchester. Everyone who attended thoroughly enjoyed the science and vowed to see each other at the conference next year.

Skin Cancer and Ageing at the Society for Melanoma Research Congress 2022

The 19th International Congress of the Society for Melanoma Research took place in Edinburgh this year.

Amaya Virós, who leads the Skin Cancer and Ageing group at the Institute, was invited to chair a Plenary Session and PhD student Shilpa Gurung from her group was also due to attend to present a talk on her project. Sadly, she was unable to join the conference due to sickness.

Fortunately, Amaya was able to present the talk on Shilpa's behalf, giving a fascinating account of her PhD project on the importance of metabolism and the influence of young and old adipocytes on melanoma metastasis.

The talk sparked an interesting discussion about fatty acids, the melanoma secretome and tropism.

It is great that Shilpa was still able to get the recognition she deserves for her work and visibility to the wider cancer research community that is so important as she develops her career.

Amaya at SMR Congress presents Shilpa's talk on her behalf.

Black in Cancer conference

Shilpa Gurung, from the Skin Cancer and Ageing group, attended the CRUK inaugural Black in Cancer conference, which was held in partnership with Black in Cancer at London's Science Museum on 10-11 October.

Shilpa is from Nepal and she was proud to be a part of history as we move forward to be more inclusive in both research and cancer awareness.

Shilpa was honoured to present her PhD project, which addresses the key role of ageing in melanoma. Attending this momentous conference gave her the chance to hear not only from researchers all around the world but also from patients and CRUK members who are engaged in the endless pursuit of equal opportunities for all.

Shilpa (3rd from left) enjoying the first Black in Cancer Conference.

Shilpa found the conference one of a kind, where she was touched by all the people who had made it possible. She hopes to be in a position where she can introduce cancer research and information to her own community in the future.

Animal Research in Discussion

Four experts leading their respective transgenic facilities sit on the panel: (left to right) Benjamin Low from the Jackson Laboratory, Petra Sipilä from University of Turku, CRUK MI's Natalia Moncaut, and (off shot) Pawel Pelczar from Biozentrum.

It was great to see Natalia Moncaut from the CRUK Manchester Institute take part in an expert discussion on how to run a Transgenic Service Facility during the International Society for Transgenic Technologies Meeting 2022 (https://tt2022.org/).

The ISTT (https://www.transtechsociety.org/index.php) is a non-profit organisation for all interested on generation and analysis of transgenic animals in research. The 17th Transgenic Technology Meeting took place in Helsinki, Finland in September.

Natalia leads the Genome Editing and Mouse Models Core Facility at the Institute, generating forefront cancer mouse models to study mechanisms of tumour initiation, progression, and response to therapy. She is a member of the NC3Rs Breeding and Archiving working group and is also a board member of the LASA Animal Science Transgenic Section.

The Laboratory Animal Science Association, LASA, seeks to ensure the provision and best use of the most appropriate animal models for medical, veterinary and other scientific purposes.

Its mission is to advance scientific understanding and knowledge of the use, care and welfare of laboratory animals and promote refinement, reduction and replacement.

LASA (https://www.lasa.co.uk/) held its Annual Conference as a face-to-face meeting on the 22nd and 23rd November. The informative scientific programme included topics and state of the art lectures on innovations in Animal Care & Welfare, Breeding and Husbandry, Training and Education, 3Rs and discussions on Regulatory and Policy frameworks.

Natalia chaired the Animal Science (Transgenics) Section, which covered interesting talks on the new horizons and challenges for mouse genetics with the National Mouse Genetics Network, the impact of CRISPR on the 3Rs and the use of genetic monitoring to increase the rigor and reproducibility of research.

We are proud of Natalia for her visibility in promoting the Institute and animal welfare at these two events.

Institute scientists and biotech company present early clinical data at international meeting

Tim and Luciano stand with CellCentric Chairman and CEO Will West in front of their joint poster.

Institute scientists, Tim Somervaille and Luciano Nicosia, presented new data in collaboration with CellCentric at the 64th American Society of Haematology Annual Meeting.

Tim, who leads the Leukaemia Biology group, and his PhD student Luciano, attended the December meeting in New Orleans, Louisiana to show clinical data for the first time on p300/CBP inhibition to treat blood cancer.

Their poster displayed the potent activity of Inobrodib (CCS1477), first in class p300/CBP bromodomain inhibitor, in 26 patients with relapsed/refractory multiple myeloma.

CellCentric, a privately owned, clinical stage biotechnology company pioneered the small molecule inhibitor Inobrodib to treat cancer. The company developed the oral drug inobrodib from concept through to clinical trials. Inobrodib has shown good long-term tolerability at the recommended phase 2 dose as monotherapy.

Tim is the Chief Investigator of Study CCS1477-02, CellCentric's Phase 1 / 2, international haematological malignancy study, and he said, "We are excited with these initial clinical results, which show inobrodib has the potential to offer patients with advanced multiple myeloma an additional treatment option. Furthermore, the preclinical data also presented today outlines and supports the hypothesis that targeting p300/CBP with inobrodib represents an entirely novel therapeutic strategy in this disease setting. Taken together, these findings provide clear encouragement for the further clinical development of this first in class drug."

Further details are set out in CellCentric's press release, scan the QR code to find out more.

SCAN ME

Download poster
https://t.co/nufrmqNBDa

Prizes and Funding

Manchester clinical scientist to brainstorm technological innovation for cancers of unmet need

Congratulations to Sara Valpione who has been selected to attend a cancer sandpit workshop led by UKRI funding agency, the Medical Research Council.

Sara, a consultant oncologist at the Christie Hospital and honorary clinical scientist at CRUK Manchester Institute, is delighted to have been accepted on the workshop 'Technological innovation for understanding cancers of unmet need'.

The MRC is looking to fund research that allows us to understand cancer better and to treat cancer effectively.

The two-day sandpit, which takes place in Manchester in January, aims to bring together researchers from diverse disciplines to drive co-development of innovative technologies to understand hard-to-treat cancers.

Together with experts from a wide range of disciplines, Sara will apply her skills in clinical oncology – including hard-to-treat oesophageal cancer – and immunology to brainstorm and co-develop innovative technological approaches to cancer biology.

The objective is to build interdisciplinary teams during the sandpit to develop novel research proposals that address technical challenges in hard-to-treat cancers.

The Medical Research Council will then fund the best 'high-risk high-reward' research to develop these technological innovations to understand cancer better.

Well done Sara and good luck!

Next generation of leaders in oncology – selected for ESMO Leaders Generation Programme

Two oncologists from The Christie are among those selected as the next generation of leaders in oncology with a top international award.

Sara Valpione and Rebecca Lee were recognised by the European Society for Medical Oncology.

Sara came to Manchester from Italy in 2015 as a Research Fellow and has been a consultant at The Christie for a year and honorary clinical scientist at the Cancer Research UK Manchester Institute, having previously worked in the Molecular Oncology group.

Rebecca completed her Clinical Research Training Fellowship in 2018, and as well as becoming a consultant oncologist at The Christie NHS Foundation Trust, she is a senior lecturer in medical oncology at The University of Manchester, and postdoctoral clinical fellow at The Francis Crick Institute. Rebecca undertook the research for her PhD in the Molecular Oncology group at the Institute.

The award, designed for oncologists aged 40 and under, is gifted by ESMO, the European Society for Medical oncology, Europe's leading professional body for oncology.

To gain the ESMO Leaders Generation Programme certificate, both women went through a series of training and workshops and received their certificates during a graduation ceremony at the Museum d'Orsay in Paris.

Both melanoma specialists, Sara has a particular interest in studying the immune system and has already made some game-changing discoveries including pioneering studies on the biology of T lymphocytes – cells of the immune system with the potential to kill cancer cells – in cancer patients published in leading scientific journals like Nature Cancer and Nature Communications.

Rebecca's PhD examined precision medicine approaches to melanoma treatment and is working closely with the Institute to help design studies to improve outcomes for patients with melanoma that has spread to the liver and clinical trials on circulating tumour DNA (ctDNA).

Rebecca, who was also recently awarded the Wellcome Trust Early Years Fellowship and is a senior lecturer in medical oncology at The University of Manchester said, "Training at The Christie has given me a fantastic foundation in oncology. The recognition by ESMO of this, and the opportunity to learn further from top international oncologists, as well as the network it provides, will help me to develop new treatment strategies for patients with melanoma."

Sara said, "It was a wonderful experience, and I am sure my patients and colleagues will benefit from what I learned and the new collaboration network the Programme provided. The fact that the Programme took place and successfully completed during the pandemic is a proof of the resilience of oncology. Patients can be reassured that we will keep the work going despite everything."

Press release posted 11 October 2022 on the Christie website.

Sara and Rebecca receive their certificates in Paris along with the other graduates from the ESMO Leaders Generation Programme.

Institute Director receives Lifetime Achievement Award

Caroline receives Lifetime Achievement Award from Massimo Cristofanilli.

Congratulations to Institute Director Caroline Dive on receiving the 2022 International Society of Liquid Biopsy Lifetime Achievement Award.

Caroline was presented with the award by past ISLB President Massimo Cristofanilli at their Fourth Annual Congress held on 20-22 October in Miami, Florida.

Founded in 2017, the aim of the organisation is to connect healthcare professionals to improve and implement liquid biopsies in clinical routine practice.

Caroline was recognised for her amazing contributions to the field of liquid biopsies – a simple blood test used to find cancer cells that have broken free from tumours and are circulating in the bloodstream. This technique is revolutionising the earlier detection of lung cancer, the leading cause of cancer death worldwide.

She delivered her award lecture on 'Liquid Biopsies in Lung Cancer - Detection, Subtyping and Disease Monitoring'.

Well done Caroline.

Members of the digital Experimental Cancer Medicine Team proudly receive their Commitment to Equality Award.

Encouraging Inclusivity in Technology Clinical Trials Project wins award

The winners of the first ever Greater Manchester Cancer Awards were announced at a ceremony on Tuesday 18th October.

In recognition of how much impressive work is being undertaken in cancer care and research across the region, the Greater Manchester Cancer Alliance wanted to celebrate those who have dedicated their time to improving outcomes and experiences for people affected by cancer.

There were a range of award categories honouring outstanding work, including the 'Commitment to Equality Award'.

Congratulations to the digital Experimental Cancer Medicine Team who won the Commitment to Equality Award for their 'Encouraging Inclusivity in Technology Clinical Trials' project.

The digital Experimental Cancer Medicine Team – part of the CRUK Manchester Institute Cancer Biomarker Centre – conducts technology clinical trials to develop new technologically-enabled healthcare pathways through patient empowerment.

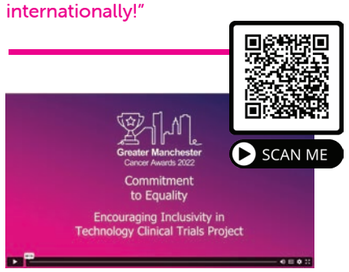
Not all patients however can utilise modified care pathways involving technology due to inequitable access, causing a 'digital divide'.

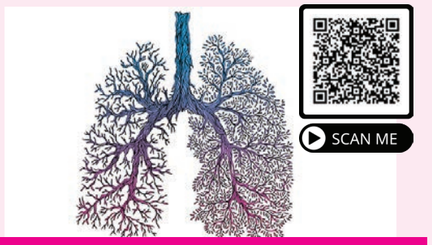
Partnering with Vocal – a not-for-profit organisation that creates opportunities for people to learn about and have a voice in health research in Greater Manchester – the team aimed to develop inclusivity guidance for future development of technology clinical trials.

The outputs from this project include inclusivity principles to guide all current and future work and an interactive checklist.

The Christie NHS Foundation Trust are now embedding the findings in their own research and sharing the guidance more widely.

The award judges said, "the project showed careful co-production and collaboration and included clear outputs from their work on this digital divide: 'The outputs from this project include inclusivity principles (5 key principles) to guide all current and future work, and an interactive checklist for use throughout the research process – to be completed by the team behind each piece of research'. There is a plan to share widely and internationally!"





CRUK launches most transformative lung cancer study

Cancer Research UK make a multi-million-pound investment in TRACERx EVO, the next phase of their flagship lung cancer study, TRACERx.

Ten years ago, research on lung cancer was still limited, despite the disease being the most common cause of cancer death in the UK. Back then, around 42,000 people were being diagnosed each year – that figure now stands around 48,500, with over 35,000 dying from lung cancer.

TRACERx is the world's largest long-term lung study. Launched in 2014 to explore the evolution of lung cancer from diagnosis through to disease relapse, the goal was to learn how to treat people based on the individual characteristics of their cancer.

The findings from TRACERx over the past nine years have been remarkable and researchers can now predict whose lung cancer will return after surgery using a simple blood test to detect traces of tumour DNA.

TRACERx EVO is a new programme that builds on the discoveries made in TRACERx.

Charles Swanton (Francis Crick Institute), Sergio Quezada (UCL) and Institute Director Caroline Dive will co-lead an international consortium of researchers in four countries.

Over the next seven years, TRACERx EVO will continue to transform the field of lung cancer research. The team of international researchers will explore how the tumour environment affects lung cancer development, how air pollution causes lung cancer, develop new technologies, and help develop rapid advancements in therapeutic strategies in this disease.

This next phase promises to herald further exciting data that will improve the treatment and care of patients with lung cancer.

Alicia giving the President's Prize award lecture on her PhD work study CUP.

Institute Clinical Fellow wins Association of Cancer Physicians President's Prize

Congratulations to Alicia Conway who passed her PhD viva in September with her project on Cancers of Unknown Primary.

Patients with 'Cancer of Unknown Primary' (CUP) have metastatic disease at diagnosis but standard investigations fail to identify where the initial tumour originated. Patients generally have limited treatment options and poor outcomes. CUP is unfortunately the 5th commonest cause of cancer death in the UK.

Alicia was a Clinical Fellow in the CRUK Manchester Institute Cancer Biomarker Centre and was aiming to molecularly detect the tissue of origin – the primary site where the tumour began – to direct therapy for patients with CUP.

She was also awarded Association of Cancer Physicians President's Prize at the annual Cancer Physicians in Training weekend in October where she gave a fantastic presentation on her work.

The Association of Cancer Physicians is the professional body that represents and supports medical oncologists in the UK. The Prizes are awarded annually to UK trainees in Medical Oncology who have performed high quality research on either clinical or basic research related to cancer.

On receiving her award, Alicia said she was, "Honoured and humbled to have been awarded the President's prize. Thanks to all who helped me!"

Alicia is now an Academic Clinical Lecturer.

Well done Alicia.

Alicia receives the President's Prize for her contributions to cancer research.

Manchester Biomedical Research Centre Boost

Greater Manchester has been awarded its largest ever research funding to tackle health inequalities and drive health improvements across the city region.

The National Institute for Health Research has invested a further £59.1 million in the Manchester Biomedical Research Centre.

This is the largest single research award given by the NIHR to the city region. The BRC will translate its scientific discoveries into new treatments, diagnostic tests, and medical technologies to improve the lives of patients in Greater Manchester, and beyond, over the next five years.

Formed in 2017, with an initial investment of £28.5m, the NIHR Manchester Biomedical Research Centre brought together world-leading researchers from across The University of Manchester, including the Cancer Research UK Manchester Institute, and four NHS Trusts in Greater Manchester.

This award is a significant boost to the city region and will help to increase the coverage of early-stage research across the nation and ensure everyone has access to cutting edge clinical trials.

Within cancer, the new BRC will focus on four themes – Cancer Prevention and Early Detection, Cancer Precision Medicine, Advanced Radiotherapy and Living with and Beyond Cancer.

Cancer Precision Medicine is led by Institute Director Caroline Dive and includes CRUK MI researchers from a range of disciplines. Under this theme, the Centre aims to deliver a more personalised and proactive approach to caring for patients with cancer.

This is a truly exciting time for everyone in Greater Manchester, and Manchester BRC is pivotal to creating a better future for all of us.

The new BRC was officially launched on 1 December and Director Professor Ian Bruce took the opportunity to reflect on some of the achievements from April 2017 until the end of March 2022:

- 2,543 Research Publications
- 87,488 Participants recruited
- 294 Research Projects
- 104 Strategic Partnerships
- 85 Small and Medium Enterprises worked with
- 935 Patient and Public contributors

Leveraged income: £293,377,331 (more than 10x the NIHR award)

Staff News

AWERB awards

The Animal Welfare and Ethical Review Body (AWERB) has a role in promoting the day-to-day implementation of the 3Rs – Replacement, Reduction and Refinement – and supporting a 'Culture of Care'.

The AWERB Recognition Award recognises the commitment of our staff to animal welfare. Here we celebrate the latest award winners:

Diane Beeston from the BRU.

Diane questioned a way of working in a proactive and positive way to support animal welfare. During training, she questioned the different anaesthetic dosing regimen of mice in two experimental techniques, which led to the refinement of one of the procedures.

Darryl Coles from the CBC.

Darryl has been recognised for his extremely proactive and engaged contributions to the Culture of Care sub-group. He used initiative to develop his own pledge and design a logo for the Culture of Care sub-group that we can use in posters and other activities.

Thomas Bosley from the BRU and Kim Kirkham, who works for Sodexo at Alderley Park.

We wish to thank them both for their proactive approach and enthusiasm in supporting their team through a challenging time.

They both stepped up and quickly sought training to support the operation of the cage wash when needed. The cage wash is a critical area in terms of supporting the research work and ensuring the mice have clean cages when required.

They willingly helped the group (and the mice) through a challenging time and evidently put great effort and enthusiasm into learning the role. Some of the equipment is complex to operate – and needs to be managed safely – and they were both proactive in rising to the challenge.

Maria Peiris-Pages from the CBC

Maria has been recognised for her proactivity and enthusiasm in supporting the BRU mouse breeding team at the incubator.

This was illustrated in how she worked with AWERB members to develop a talk that could be appreciated and understood by the team. Engaging the animal care and technical staff by sharing how the mice are used to deliver critical scientific results is important in terms of their motivation and increases a sense of value in the job. This is a fundamental aspect of having a positive Culture of Care.

In recognition of their support, engagement and commitment to animal welfare and a Culture of Care, they will each receive an AWERB recognition voucher.

Congratulations everyone!

Culture of Care in Animal Research

By Sally Robinson, AWERB Chair

One of the legal tasks of an Animal Welfare and Ethical Review Body (AWERB) is to promote a Culture of Care. But what does this mean and why is this important?

The use of animals in research is an area where there are often polarised views within society, and it can be an emotive topic and an emotional burden for staff who work with animals.

A positive Culture of Care leads not only to enhanced scientific quality from the animal research conducted and better animal welfare but also to staff who feel supported, engaged, and respected for their contributions to animal research and encourages the ability to challenge and strive for improvement.

Within a positive Culture of Care compliance risks are reduced, and staff feel able to talk about their role in animal research in a positive way. For all these reasons a positive Culture of Care is essential.

A positive Culture of Care should never be taken for granted – there are always small things that can be improved, and ways that staff can feed back in an inclusive and open way.

The AWERB established a Culture of Care sub-group. This group has had several meetings to brainstorm what a Culture of Care might look like and how it could be described. The group have developed a Culture of Care Pledge, which was shared more widely within the Institute for feedback.

This pledge will act as a focus from which improvement initiatives can be developed. The goal is to host a launch event for this pledge early in the New Year. Staff will be able to sign up to the pledge and provide input and feedback on potential areas for improvement.

Staff can seek guidance and support from Sally or Andrew Porter (AWERB member).

Culture of Care Pledge at the CRUK Manchester Institute

Our goal is to build on the compassion and experience of all in vivo stakeholders in the areas of excellence that already exist at CRUK MI e.g., in the care, welfare and use of our mice, the variety of the contributions from all of our staff and the delivery and impact of our high-quality science.

In order to achieve this goal:

We Pledge to

- Strive to look for ways to further improve the care and welfare of the mice we use by adopting best practice, putting the 3Rs at forefront of our decision making, and ensuring that each individual mouse is valued
- Maintain a safe and respectful workplace for all our colleagues working directly and indirectly with our mice where open-mindedness, challenge and enquiry are encouraged, differing perspectives are heard, collaboration and teamwork are valued, personal development is supported, and the emotional responsibility of animal work is recognised
- Share our research and practices with the wider scientific community, to clearly communicate the benefits and developments in animal research with the public, and to share our learnings internally to promote best practice to live up to the values of the Institute

STAy Committee update

The STAy Committee of Early Career Researchers have been ramping up their activities following the post-pandemic slowdown, and in preparation for the move to the new research centre in 2023.

They recently hosted a Newcomers Event at the Red Lion in Withington to welcome new PhD students and postdocs to the Institute. Everyone had a great time over food while getting to know each other.

The STAy Committee also helped coordinate the social activities at the Colloquium Social, which included a quiz and some interactive icebreakers to encourage people to approach and talk to other members of the Institute.

Connecting with the new starters.

The committee also invited and hosted two external speakers as part of the Institute Seminar Series. Dr Jess Butler, a senior research fellow at the University of Aberdeen and lead data scientist at NHS Grampian, gave a talk on "Organising ourselves for world domination: how academics can work together to improve research quality".

As Local Network Lead for the UK Reproducibility Network, Dr Butler was well-placed to discuss how funders and grassroots organisations are working to improve research culture.

Following her seminar, a group of researchers stayed online to continue the discussion and see how some of these ideas and initiatives could be applied at our Institute.

We also welcomed Dr Anguraj Sadanandam from the Institute of Cancer Research, who spoke on his work integrating multi-omic and pre/clinical data using artificial intelligence and machine learning to facilitate precision medicine.

Dr Sadanandam is also a director at the Centre for Global Oncology at the ICR and STAy member Cath Felton chaired a very interesting session where he shared his experiences of setting up and supporting collaborations with low- and middle-income countries.

This session builds on an earlier STAy event for World Cancer Day in February where we discussed how we as researchers can consider the global impact of cancer research, in conversation with Prof David Wedge from The University of Manchester, who has a special interest in global inequalities.

Participants in the session with Dr Sadanandam were keen to explore the themes of equity and collaboration with partners around the world, and this is likely to be a topic that the STAy Committee will return to in the future.

The committee continues to meet fortnightly, and new members are always welcome, as we plan activities to help postdocs, students and scientific officers stay connected with each other and stay informed about the wider world of research.

Postdoc Appreciation Week

In September, the STAy Committee hosted an event for Postdoc Appreciation Week at the Oglesby Cancer Research Building in Withington.

Postdocs working on cancer were invited from across the University to join us for a social gathering to help develop new connections across the wider cancer community in Manchester.

This initiative was in response to a survey of cancer postdocs, which revealed many were struggling to connect with others from different groups or different parts of the University.

The session was hosted by Andrew Porter from the CRUK Manchester Institute and Simon Reeds from the Manchester Cancer Research Centre, supported by MI PhD student Bradley Revell who helped with the setup of the event.

Rob Bristow, Director of the MCRC, came to speak with the postdocs and thank them for their work, which he said was key to the success of cancer research across Manchester.

After some refreshments it was time for a speed-networking activity that helped people meet each other and got everyone talking.

Finally, the postdocs were shown a new Microsoft Teams site – the Cancer Postdoc Network – which is providing a virtual space for researchers to meet, set up collaborations, and share tips about living and working in Manchester.

We hope now that our Manchester postdocs are finding it easier to connect with one another.

Andrew engaging with the postdocs.

New starters in the Operations Team

We welcome new starters Naomi Samuels and Helen Jones to the Operations Team at the Institute.

Naomi has a background in administrative support with a passion for the charity sector.

She previously worked in the Gluten Free team at Warburtons, where she also sat on the fundraising team. During event season, she would work with CRUK on the events and help with Race for Life, Pretty Muddy, and the Shine walks. Her two favourite things are food and her cockapoo Fonzie!

Naomi joins us as Executive Assistant to the Cancer Biomarker Centre Director, Caroline Dive.

Helen comes from a business and IT background and has worked in several senior PA posts for PWC, Deloitte and most recently with the NHS. She is also a qualified ICT high school teacher, although her last teaching post was at a primary school in special measures, which she describes as a challenging but rewarding time. In her spare time she enjoys reading and listening to podcasts of interest.

Helen has taken up the position of Administration Services Co-ordinator.

They both take on the additional roles of supporting Institute-wide operational activities.

Welcome to the Institute Helen and Naomi!

Walking for Cancer Research UK

Emma Murphy completed the 'walk 100 miles in October' challenge for CRUK last month.

Emma, who is a research associate in the Targeted Therapy Group within the Division of Cancer Sciences at The University of Manchester, raised £175 for walking 102 miles.

Great effort, well done Emma!

Congratulations Emma for completing your 100-mile challenge.

Review of the inaugural Institute Book Club book

By Andrew Porter, Research Integrity and Training Adviser

I had been thinking of running a book club as a way of helping members of the Institute engage with some of the wider issues around research integrity and culture.

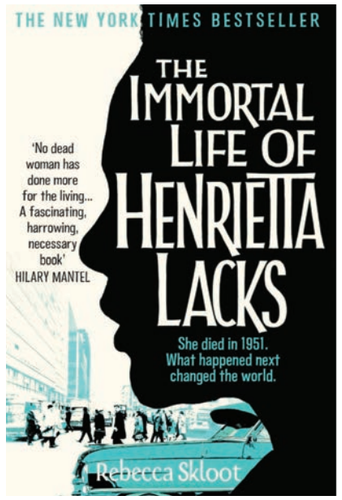
With Cancer Research UK hosting the first 'Black in Cancer' conference in October – Black History Month – this seemed like a good opportunity to read "The Immortal Life of Henrietta Lacks".

Written by Rebecca Skloot, it tells the story of Henrietta Lacks who was treated for cancer in 1951 at Johns Hopkins in Baltimore, and sadly died shortly after.

Cells from her cancer – taken without her knowledge – were grown in a research laboratory and became the first immortal human cell line.

The book describes how these 'HeLa' cells were instrumental in many of the major discoveries of modern biology and cancer research, and explores the ethical and moral issues around the use of these cells in medical research.

The book club met each Monday lunchtime in October to discuss the story. We found it a shocking but informative read as we engaged with the ethical questions raised around informed consent and ownership of human tissue, as well as the emotional story of Henrietta and her family which highlights issues of racism and inequality.



The group highly recommend the book to anyone with an interest in the history of cancer research, and we are open to suggestions for the next Institute book club!

IN THE SPOTLIGHT

Shilpa Gurung

Shilpa is a PhD Student in the Skin Cancer and Ageing group, led by Amaya Viros. She is studying the role of adipocyte biology on melanoma progression, with particular focus on how ageing of the skin affects adipocyte biology and how these microenvironment changes affect melanoma progression.

Originally from Nepal, Shilpa joined the Institute in 2019 and during that she has received prizes in recognition of her work. She has also been selected to talk at international conferences, including the AACR earlier this year.

1 What is your favourite part of the UK?
Edinburgh.

2 What was your best ever holiday and why?
Jordan with my cousin. We did a road trip around Jordan starting from Amman to Wadi Rum, to red sea and to dead sea. It was our first time in the middle east and very different from all the places we had been. It was the best because I never thought I could see the milky way galaxy and the planets.

3 Which website do you always check, and why?
Twitter, to check trending topics.

4 What is your favourite film?
All the Harry Potter films.

5 What is your favourite band/singer?
Linkin Park.

6 If you had to change careers tomorrow, what would you do?
I would like to try working in management.

7 What is the most important lesson that you have learnt from life?
Believe in yourself.

8 Name three things you would take with you to a desert island?
A book, a pen, a bottle.

9 What is your greatest fear?
Losing my loved ones.

10 How would you like to be remembered?
I was true to my words.

11 If you could change one thing in your past what would it be?
Nothing.

12 What is your signature dish to cook?
Curry.

13 You've just won the lottery and have £5 million pounds to spend. What do you buy first?
A house.

14 What is your idea of perfect happiness?
A content life.

15 What keeps you awake at night?
Asking myself why is the world so corrupted?

Teamwork in action

In the beginning of November, a hardy team of animal technicians and Logistics staff undertook a mammoth cage assembling session in the new cancer research building on our old site in Withington.

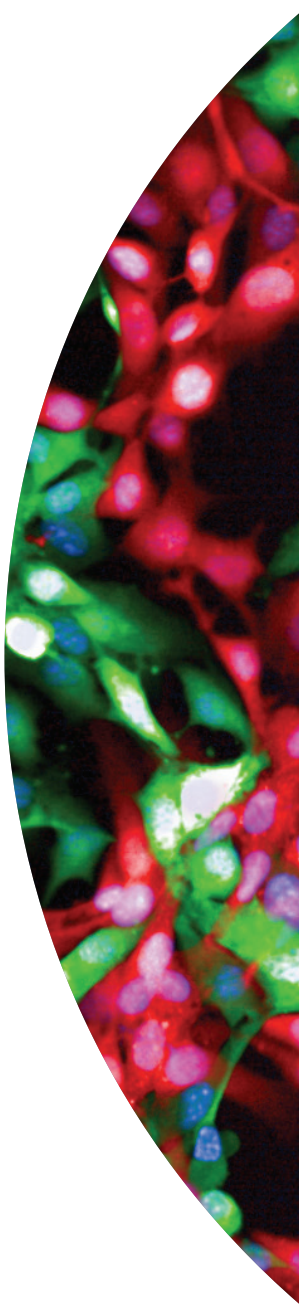
The team – Lisa Doar, Jo Roberts, Andy Lloyd, Mark Craven, Mike Alcock, Lewis Woolley and Laura Dean – worked tirelessly to complete the fit out for the Biological Resources Unit.

Together they constructed more than 3600 animal cages.

Great effort team!

Working hard building cages.

Editorial Team:
Steve Bagley
Gillian Campbell
Karen Lee
Andrew Porter
Caroline Wilkinson



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