

Bringing research to the public: Outreach at CRUK Cambridge

By Tim Young

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As cancer continues to have a devastating effect on so many of us, it is only natural that people want to be informed about the activities of the world's leading cancer research organisation: Cancer Research UK (CRUK). They want to learn, understand, contribute and be involved in the research that states 'Together we are beating cancer'. CRUK is a charity, receiving donations from: monetary gifts, legacies, charity shop donations and purchases, race for life, bake sales, individual and group fundraisers, and many more examples. This money is used to fund a huge amount of research across the UK, including four large Cancer Institutes: Cambridge, Manchester, Scotland and the Francis Crick Institute in London.

As charitable funded institutes, these centres have an obligation to the public, and to CRUK, to be open and honest about their research and to give back whenever possible. A simple but effective approach to this is through outreach, which can take many forms, but always has the same goal: to inform the public via participation, engagement and involvement. Part of CRUK's mission statement is 'People's lived experiences should be a key driver for health and social care research'.

Here at the Cambridge Institute (CI), we have a fantastic outreach team with a number of annual events such as the Cambridge Festival, Careers Lab and Project Day. For the first time, later this year, we will be welcoming T level placement students as part of the UK Institute for Technical Skills and Strategy (ITSS) programme. The students will have the opportunity to observe and work in different roles within the CI and learn core technical and laboratory skills helping them get a good foundation

for their future career.

At the 2025 Cambridge Festival over 100 members of the public attended a panel discussion with leading CI researchers entitled "Do we know too much about Cancer?" discussing why more data isn't always a good thing and how we can utilise emerging technologies such as AI to bring real change to patients.

Career Lab Feedback –

The annual Career's Lab (<https://www.cruk.cam.ac.uk/students/careers-lab/>) gives Year 12 students an opportunity for a week's work experience at the CI with lots of hands-on experiments they can perform and a chance to learn about many career options available in cancer research and to challenge preconceptions about working in science. This year it was more popular than ever, with a record breaking number of applicants wanting to take part.



Professor James Brenton (Professor of Ovarian Cancer Medicine, Senior Group Leader at CRUK CI) at the 2025 Cambridge Science Festival.

“The experience was amazing and exceeded my expectations by far. Seeing all the research in action has really changed my perspective on choosing a career and it has been incredibly fun!”

Microscopy is a favoured technology to showcase latest research and developments, and in the Microscopy Core Facility at the CI the team is always involved. We worked with an organisation called Form the Future to coordinate a Cambridge LaunchPad STEM immersion experience for the Year 9 classes of Thomas Clarkson Academy in Wisbech. This took place shortly before the pupils chose their GCSE subjects, and the hope is to encourage more into STEM subjects and increase their awareness of career opportunities.

Twenty pupils from Thomas Clarkson Academy visited the CI for their immersive day. First, they were welcomed to the institute by the director

and introduced to the research carried out. They were split into groups of six or seven for three lab rotations. The first rotation was sample preparation and lab skills, where they were given the chance to pipette and ‘feed’ live cells and introduced to a range of laboratory equipment and apparatus, giving them an insight into the everyday wet lab experience.

LaunchPad Feedback from Yr9 Students –

“I learned about different areas in labs, the ways microscopes function, cells and cancer in depth, and more, and to have fun at what you enjoy”

“I would like to research more jobs to do with STEM and dig deeper into the countless possibilities that come with it.”

Next, they were taken to the Microscopy core and introduced to the concept of fluorescence and how we utilise it for imaging specific cellular components. They were given an opportunity to view a sample on our Stellaris Confocal Microscope as well as comparing the differences between an air and oil objective. They were taught some confocal techniques including z-stacking and tile scans to image over a larger area. They were also shown the light sheet microscope and taught how larger samples can be cleared for imaging. They had the opportunity to view pre- and post-cleared samples and how the light sheet can be utilised for faster image acquisition of these, as well as a hands-on experience of controlling the light sheet sample holder and setting up the lasers.

Their final rotation involved viewing tumours with virtual reality headsets, supplied by the IMAXT (Imaging and Molecular Annotation of Xenografts and Tumours) team here at the CI. They had the opportunity to move around within a tumour for a truly immersive experience.

Finally, they were taken on a tour of the inner

workings of the CI building, including the liquid nitrogen room and plant rooms. They were able to see all of the equipment and services necessary to run the building.

These events are always well received with lots of positive feedback.

Beating cancer can and should involve everyone. At the CRUK-funded institutes, we have an incredible opportunity to bring the research to the public, to open our doors and engage with those affected by cancer and show that progress is being made and that ongoing research is vital. Furthermore, people affected by cancer and members of the public can directly participate in research by taking part in a research study or getting involved in shaping research e.g. by helping to define research questions or developing patient-facing documents.

To learn more about Cancer Research UK's patient and public involvement and to read their outreach mission statement click here: <https://www.cancerresearchuk.org/for-researchers/how-we-deliver-research/patient-and-public-involvement-in-research>



Tim Young pictured outside the CRUK-Cambridge Institute.