



Leicester Cancer Research News

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'Mud' scientists run wild

Cancer researchers, clinicians and scientists have been challenging themselves away from the laboratory benches. Teams took on the demanding Tough Mudder Half at Belvoir Castle in May and Race for Life at the Leicester Victoria Park, raising £3,000 for Cancer Research UK.



Lest-ah is becoming a global brand

Thanks to two fairy tale stories, one involving the King in the car park (Richard III) and the other an unbelievable sporting achievement - Leicester is now firmly on the global map.

PEACE Study: Cancer patients supporting cutting-edge research by donating tissues after death



Dr John Le Quesne is lead researcher for the study at the University of Leicester. He said: "We are delighted to be part of this grant from Cancer Research UK. It will help to further our understanding of cancer. We are so incredibly thankful to the patients who have agreed to take part. With their help we can do research that will help more people survive this devastating disease".

RESEARCHERS FROM Leicester will be collaborating with scientists across the UK in an initiative to expand the first national post-mortem cancer study: PEACE (Posthumous tissue donation in CancEr). Designed to inspire new approaches to beating cancer, this CRUK award will invest around £4 million, over five years.

Doctors will invite terminally ill patients — most of whom are taking part in clinical trials — to donate samples of their cancer after death. They will be asked to discuss the issue with their families before deciding to be part of this pioneering research. It aims to understand how cancer changes and evolves in advanced stages of the disease to help develop better treatments for cancer that has spread.

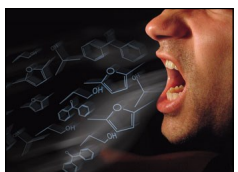
Lydia Knott, aged 79 from Newtown Linford, Leicestershire was diagnosed with lung cancer two years ago having never smoked. Lydia, who works as a parish council clerk, said: "I had no qualms about agreeing to take part. I didn't even have to go away and think about it. I said yes immediately. I understand it's a sensitive area and not everyone is going to feel comfortable about this topic. But my view is that if it helps other people and advances research into cancer treatments, then it can only be a positive study."

Dr Le Quesne is an Honorary Consultant Pathologist at University Hospitals of Leicester NHS Trust and Programme Leader at the MRC Toxicology Unit, Leicester.

Rapid diagnosis is just a breath away

EXPERTS FROM the University of Leicester, University Hospitals of Leicester NHS Trust and Loughborough University are leading the establishment of a new Centre to develop breath analysis tests that use the same technology as that used to detect explosives in war zones.

Exhaled breath contains volatile organic compounds (VOCs) that give a snapshot of the biological processes occurring within the lungs and beyond. Breath analysis could give an instant diagnosis and help doctors pick the best treatments for a range of conditions, including cancers, respiratory infections and diseases such as asthma and chronic obstructive pulmonary disease.



The Consortium, East Midlands Breathomics Pathology Node (EMBER), will draw upon expertise in clinical research, analytical chemistry, data management and mathematical modelling, to develop rapid,

at-patient and in clinic non-invasive approaches to diagnosis, phenotyping and stratification.

Professor Chris Brightling, Professor of Respiratory Medicine and NIHR Senior Investigator at the University of Leicester's Department of Infection, Immunity and Inflammation, said: "EMBER brings us an exciting opportunity to develop new breath tests to understand the types of diseases that one has and the right treatments for them. This is applicable to all patients and it has particular advantages in the elderly and children where other tests such as blood tests are more challenging."

Based on the same technologies, experts at the University of Leicester and University Hospitals of Leicester NHS Trust, in collaboration with Cambridge-based Owlstone Nanotech Ltd, are undertaking a ground-breaking clinical trial, LuCID (Lung Cancer Indicator Detection) with the aim of detecting early stage lung cancer through breath testing.

The clinical study is being led by Professor Salman Siddiqui, Professor of Airways Disease and Respiratory Medicine and adult chest physician at the University of Leicester and Glenfield Hospital.

World first blood cancer drug trial reveals life-changing results

CLINICIANS FROM the University of Leicester and Leicester's Hospitals lead an international clinical trial for patients with blood cancer. This clinical trial, a first-in-man study, looked at the efficacy of a new inhibitor, ONO/GS-4059, in the treatment of Chronic Lymphocytic Leukaemia (CLL) and Non-Hodgkin Lymphoma (NHL) patients that have not been responsive to current chemotherapies.



This study, led by Professor Martin Dyer and Dr Harriet Walter, opened in January 2012 and 90 patients were enrolled in different centres in the UK and in France, with 28 coming from

Leicester. Patients with CLL showed the best response and most of them are still on the study after 3 years, and remarkably without notable toxicities.

Professor Martin Dyer is Professor of Haemato-Oncology at the University of Leicester and Honorary Consultant Physician in the Department of Haematology at Leicester Royal Infirmary.

He said; "I am so delighted that we have been able to run this study in Leicester. The establishment of the Hope Against Cancer Clinical Trials Facility, under the directorship of Professor Anne Thomas allows us to lead these kinds of studies that really do change the life of our patients.

We are dedicated to offering the best treatment options to our patients and the development of targeted therapies that increase the chance of therapeutic success and at the same time avoid toxicities generally observed in chemotherapies, is the

most exciting progress in cancer research."

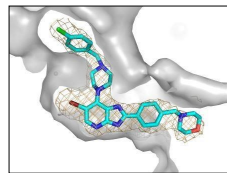
When asked how they felt about the trial, one patient said: "After just 48 hours of taking this tablet was like turning the lights on".

Dr Harriet Walter, a Clinical Research Fellow in the Department of Cancer Studies at the University of Leicester, said: "These patients were confronted with a cruel reality: they had failed multiple chemotherapy lines and there were no other treatment options available for them. This drug has changed their lives; from desperate and tired they are now leading a normal and really active life. This is hugely rewarding and encouraging".

The success story of this drug, has paved the way for its future development in combination studies, which will be opening to recruitment shortly in Leicester.

£1.7 million to speed up cancer treatment

THE UNIVERSITY OF LEICESTER has been awarded £1.7 million by Cancer Research UK over the next 5 years to speed up the time turning research into cancer into treatments for patients.



It has been awarded through a new Centres Accelerator Award for research to crack the structure of molecules involved in cancer and to develop drugs. It is a new initiative by the charity and provides

additional help to research centres in a bid to unite scientists, boost collaborative research and promote "bench to bedside" science.

The University of Leicester will combine expertise with the Institute of Cancer Research, the University of Manchester, Newcastle University, the University of Glasgow, Queens University Belfast and the University of Leeds.

Professor Catrin Pritchard, Science Director at the Cancer Research UK Leicester Centre, said: "Personalised Medicine is the future of cancer treatment, and by collaborating with centres across the UK, we look forward to accelerating research underpinning drug development."

The award aims to create high quality data in structural biology —

the 3D information about molecules involved in cancer, increase collaboration between scientists to generate new ideas and share resources.

The award was launched with a national conference, sponsored by Cancer Research UK, - "Accelerating cancer drug discovery through structural biology" held in January 2016 at the University of Leicester. The conference attracted over 100 delegates from across the UK and received excellent feedback from those who attended.

Professor Laurence Pearl, FRS from the University of Sussex, gave the keynote lecture, finalising the conference proceedings and marking the start of this auspicious award.

LEICESTER LEADS THE WORLD

Leicester heralded as most diverse city in England

- Lessons to be learned from the city as well as Premier League winning football team

THE WORLD has been beating a path to Leicester's door in wonder of how the team that narrowly missed relegation in 2015, won the Premier League in 2016. However, people will find that it is not just football that makes the city stand proud, as Leicester has plenty to share.

Leicester was chosen as the first stop on the Queen's Diamond Jubilee tour in 2012 for good reason. With a population of 340,000, Leicester is the epitome of modern Britain, in the throws of re-emergence as an exciting and cosmopolitan city.

Outside of London, Leicester has the fastest business growth rate amongst UK cities - validation of its strong entrepreneurial culture.

Leicester's gross added value (a measure of economic output) rose 22% between 2009 and 2014, generating plenty of jobs and drawing newcomers in; between 2001 and 2011 its population grew by 17%, the fourth-highest rate in the country.

Immigration has contributed much to Leicester. So much so, it is now only one of three towns and cities outside of the capital to have a majority non-white British population.

Leicester is ethnically and culturally diverse with over 70 different languages and dialects being spoken.

The large socio-economic spectrum of the city, with areas of wealth and severe deprivation are a microcosm

of the UK and an ideal environment for health research.

The County's universities are among the country's most entrepreneurial. Undergraduates are encouraged to develop their own start-ups, and the universities award seed money to "incubate" them.

Leicester has one of the biggest and busiest NHS Trusts in the country serving the population of Leicester, Leicestershire and Rutland.

University Hospitals of Leicester is nationally and internationally renowned for specialist treatment and services in cancer, cardio-respiratory diseases and diabetes.

Adapted from an article in The Economist May 7th, 2016 UK Edition.

