

Media release: The Institute of Cancer Research, London

Resistance-busting ICR drug enters clinical trial

A drug discovered at The Institute of Cancer Research, London, that could counteract drug resistance in patients with cancers including acute myeloid leukaemia has entered a phase I clinical trial at The Royal Marsden NHS Foundation Trust.

The drug, now called EP0042, is a dual inhibitor of cancer-driving proteins from the Aurora and Flt3 families – meaning it blocks the activity of both at once.

It has shown particular promise as a potential treatment for patients with acute myeloid leukaemia, and could succeed in targeting FLT3-mutated cancers that become resistant to current FLT3-selective inhibitor drugs.

It has also shown potential as a future treatment for other cancers including the childhood cancer neuroblastoma.

The opening of the clinical trial represents a major milestone in a long-running programme of Institute of Cancer Research (ICR)-led drug discovery and development research, ultimately in collaboration with the international, oncology focussed drug development company, Ellipses Pharma.

Ellipses Pharma has rapidly progressed the development of EP0042 following successful negotiations between the ICR and the company, which were led by our Business and Innovation Office.

Under the terms of the deal between the ICR and Ellipses Pharma, the company took full responsibility for the development programme including additional pre-clinical studies and reformulation of the drug product to obtain a clinical trial authorisation, progression into the clinic for the first-in-human clinical trial, and any further clinical studies needed.

EP0042 was originally discovered in a project led by Spiros Linardopoulos, former Team Leader in Target Drug Discovery in the ICR's Cancer Therapeutics and Breast Cancer Research Divisions.

The drug has now entered a phase I trial with study centres planned in the UK, the Netherlands and Australia. If the phase I trial is successful, the drug could go on to larger trials and ultimately become a new treatment for cancers including acute myeloid leukaemia and neuroblastoma.

Dr David Taussig, Consultant Haematologist at The Royal Marsden and Honorary Team Leader in Acute Leukaemia at the ICR, is the global co-ordinating investigator on the study. He said:

“It’s incredibly challenging to develop drugs for acute myeloid leukaemia as the disease is often aggressive and prone to resistance, so survival rates are currently poor for many patients. I’m excited by the potential of EP0042 and, as new treatments are urgently needed for people with this diagnosis, I really hope to see a positive impact on patient outcomes following this phase I trial.

“EP0042 is a great example of the highly collaborative ‘bench-to-bedside’ approach of The Royal Marsden and ICR, with researchers working closely with clinicians to pioneer new and increasingly personalised treatments in order to improve and save the lives of cancer patients throughout the UK and beyond. We are also hugely encouraged by the involvement and support of Ellipses in the development of this drug.”

Dr Olivia Rossanese, Head of Cancer Therapeutics at the ICR, said:

“EP0042 is an innovative drug, targeting both Aurora and Flt3, and could ultimately counteract drug resistance in cancers including acute myeloid leukaemia and neuroblastoma.

“It’s always a real pleasure to see one of our drugs enter phase I trials – it’s the culmination of our work to translate our scientific understanding of how cancer grows into new therapies to treat patients. And it’s a reminder of the power of effective collaborations, with industry and our partners at The Royal Marsden, to develop and deliver new medicines to patients.”

Dr Rajan Jethwa, Chief Executive Officer of Ellipses Pharma, said:

“The creation and commencement of this trial reflects our commitment to accelerating the development of promising and innovative cancer treatments. We are delighted to be working collaboratively with the ICR and the Royal Marsden to take this exciting trial forward.”

Professor Paul Workman, Chief Executive at the ICR, said:

“This new drug is an excellent example of how the ICR is working to discover new treatments that overcome the ability of cancers to adapt, evolve and become resistant to treatment.

“Cancer evolution by Darwinian natural selection is the greatest challenge we face in the treatment of cancer – indeed, it is one of the greatest challenges in modern medicine – and will be the focus of our research at our new Centre for Cancer Drug Discovery, which will further enhance our work to create a new generation of resistance-busting treatments to benefit cancer patients.”

Discovery and development

The discovery and initial development of EP0042 was carried out by scientists in the ICR’s Cancer Research UK Cancer Therapeutics Unit, largely funded by Cancer

Research UK, and with additional support from Breast Cancer Now. Further preclinical studies were continued by the Cancer Research UK Centre for Drug Development, including formulation and manufacturing development.

The ICR's Business and Innovation Office commercialised the research, negotiating agreements with Ellipses Pharma and other partners.

Jennifer Hodgson, Business Development Manager in the ICR's Business and Innovation Office, who was involved in the partner negotiation, said:

“We are delighted to partner with Ellipses Pharma to progress our Aurora/Flt3 programme into the clinic. In this case it's been particularly pleasing to have been able to build a relationship with a new partner with whom we can pool expertise and resources, and together create what could become a new cancer treatment.”

- ENDS -

Notes to editors

For more information please contact Henry French in the ICR press office on 020 7153 5313 or henry.french@icr.ac.uk. For enquiries out of usual office hours please call 07595 963 613.

The Institute of Cancer Research, London, is one of the world's most influential cancer research organisations.

Scientists and clinicians at The Institute of Cancer Research (ICR) are working every day to make a real impact on cancer patients' lives. Through its unique partnership with The Royal Marsden NHS Foundation Trust and 'bench-to-bedside' approach, the ICR is able to create and deliver results in a way that other institutions cannot. Together the two organisations are rated in the top centres for cancer research and treatment globally.

The ICR has an outstanding record of achievement dating back more than 100 years. It provided the first convincing evidence that DNA damage is the basic cause of cancer, laying the foundation for the now universally accepted idea that cancer is a genetic disease. Today it is a world leader at identifying cancer-related genes and discovering new targeted drugs for personalised cancer treatment.

A college of the University of London, the ICR is the UK's top-ranked academic institution for research quality, and provides postgraduate higher education of international distinction. It has charitable status and relies on support from partner organisations, charities and the general public.

The ICR's mission is to make the discoveries that defeat cancer. For more information visit <http://www.icr.ac.uk>

About Ellipses Pharma

Ellipses Pharma is an international drug development company, focused exclusively on the development of innovative cancer medicines and treatments. Ellipses utilises the expertise of the world's largest cancer-focused key opinion leader group to oversee a pipeline of high quality clinical oncology opportunities. For more information, please visit <https://ellipses.life> For media enquiries contact Ramsay Smith, Media House International: 07788 414856 / ramsay@mediahouse.co.uk.