



Cardiff scientists take on leukaemia with drugs personalised to individual patients

Cardiff scientists are treating leukaemia by trialling new drugs tailored to individual patients' genetic make-up according to a presentation at the NCRI Cancer Conference in Birmingham today (Wednesday).

The team is running a Cancer Research UK-funded trial supported by the Cardiff Experimental Cancer Medicine Centre to develop new ways to treat Acute Myeloid Leukaemia (AML). AML can vary from person to person because of slightly different faults in different genes.

The Cardiff group is working to identify potential drugs which could treat the different variations of the disease.

The second part of the team's research is to code the genes of the people with AML entering the trials - and measure how well people with different faults in their genes respond to specific new treatments.

Cancer Research UK's Professor Alan Burnett, head of the Cardiff ECMC based at the School of Medicine, Cardiff University, said: "Our team identifies the different faults in genes which are likely to cause acute myeloid leukaemia and we develop new drugs to treat the varying forms of the disease.

"When a patient with acute myeloid leukaemia is given the new experimental treatments they are monitored to see how effective the drug is and how the patient's genetic variations impact a treatment's success."

There are 19 specialist Experimental Cancer Medicine Centres in the UK. The aim of these centres is to bring together cancer doctors, research nurses and lab scientists to make clinical trials of new treatments quicker and easier.

Dr Sally Burtles, director of centres at Cancer Research UK, said: "This cutting edge research will enable us to find more targeted and effective ways to treat people with leukaemia.

"Leukaemia can be difficult to treat because the disease spreads widely through the body - as it is not a solid tumour it cannot be treated with surgery and so it is even more crucial to develop the right drugs to treat this disease. This trial allows us to enter into an exciting new era of tailored drug development to manage and treat the disease.

"Making the leap from something that looks promising in the laboratory to testing it in patients is one of the most challenging and expensive steps in drug development - and this is the key reason why we've committed to establishing these Experimental Cancer Medicine Centres - to speed up this process and bridge that gap.

"The 19 Experimental Cancer Medicine Centres across the UK give cancer patients new opportunities to participate in early trials for the latest, most innovative and exciting anti-cancer treatments in development."

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For media enquiries please contact Emma Rigby on 020 7061 8318 or, out-of-hours, the duty press officer on 07050 264 059

About acute myeloid leukaemia:

Acute myeloid leukaemia is rare. In the UK, around 7,200 people are diagnosed each year with leukaemia. Of those, about 2,200 people have acute myeloid leukaemia. The risk of developing AML increases with age. It is most common in people over 65 years old.

Risks include:

Exposure to very high levels of radiation increases acute leukaemia risk. For example, people exposed to the atomic bomb explosions in Japan at the end of World War 2 have higher rates of leukaemia.

Exposure to the chemical benzene at work over a long time increases your risk of developing acute leukaemia. There is benzene in traffic pollution but the levels are likely to be too low to affect leukaemia risk. There is also benzene in cigarette smoke.

Smoking cigarettes can increase your risk of developing acute myeloid leukaemia.

Researchers estimate that smoking doubles or triples your risk of AML but that the risk quickly drops if you stop smoking. Smoking may account for up to 17 out of 100 (17 per cent) cases of myeloid leukaemia. There is benzene in cigarette smoke and this is likely to be a significant cause.

Certain inherited conditions, such as Fanconi anaemia can increase the risk of developing acute leukaemia. Children with Down's syndrome are more likely to get acute myeloid leukaemia than other children.

About the ECMC

ECMC stands for 'Experimental Cancer Medicine Centre'. ECMC status has been awarded to 19 centres in the UK that are specialist centres doing lots of research into new cancer treatments. The aim is to bring together cancer doctors, research nurses and lab scientists to make clinical trials of new treatments quicker and easier.

The ECMC initiative is funded by Cancer Research UK and the Departments of Health of England, Scotland, Wales and Northern Ireland. They are giving a total of £35 million pounds over 5 years to the 19 centres. The centres will use this money to run trials of new

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and experimental treatments. They will also analyse thousands of blood and tissue samples (biopsies) to help find out more about how treatments work and what happens to cancer cells.

About the NCRI Cancer Conference

The National Cancer Research Institute (NCRI) Cancer Conference is the UK's major forum for showcasing the best British and international cancer research. The Conference offers unique opportunities for networking and sharing knowledge by bringing together world leading experts from all cancer research disciplines. The fifth annual NCRI Cancer Conference is taking place from the 4-7 October 2009 at the International Convention Centre in Birmingham.

For more information visit www.ncri.org.uk/ncriconference

About the NCRI

The National Cancer Research Institute (NCRI) was established in April 2001. It is a UK-wide partnership between the government, charity and industry which promotes co-operation in cancer research among the 21 **member organisations** for the benefit of **patients**, the public and the scientific community.

For more information visit www.ncri.org.uk

NCRI members are: the Association of the British Pharmaceutical Industry (ABPI); Association for International Cancer Research; Biotechnology and Biological Sciences Research Council; Breakthrough Breast Cancer; Breast Cancer Campaign; Cancer Research UK; CHILDREN with LEUKAEMIA, Department of Health; Economic and Social Research Council; Leukaemia Research; Ludwig Institute for Cancer Research;

Macmillan Cancer Support; Marie Curie Cancer Care; Medical Research Council; Northern Ireland Health and Social Care (Research & Development Office); Roy Castle Lung Cancer Foundation; Scottish Government Health Directorates (Chief Scientist Office); Tenovus; Welsh Assembly Government (Wales Office of Research and Development for Health & Social Care); The Wellcome Trust; and Yorkshire Cancer Research.

About Cancer Research UK

- Cancer Research UK is the world's leading charity dedicated to beating cancer through research.
- The charity's groundbreaking work into the prevention, diagnosis and treatment of cancer has helped save millions of lives. This work is funded entirely by the public.
- Cancer Research UK has been at the heart of the progress that has already seen survival rates double in the last thirty years.
- Cancer Research UK supports research into all aspects of cancer through the work of more than 4,800 scientists, doctors and nurses.
- Together with its partners and supporters, Cancer Research UK's vision is to beat cancer.

For further information about Cancer Research UK's work or to find out how to support the charity, please call 020 7121 6699 or visit www.cancerresearchuk.org

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