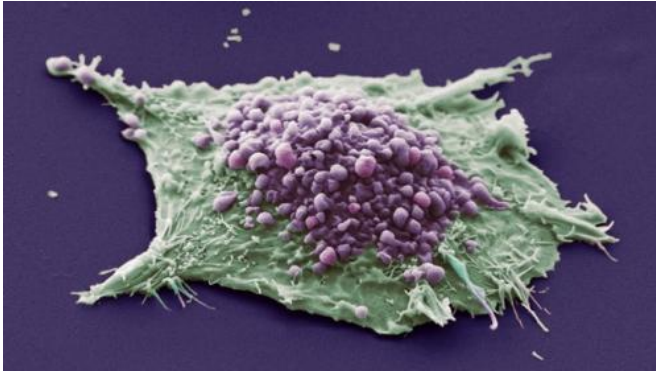


Scientists trigger self-destruct switch in lung cancer cells

31 October 2014



Cancer Research UK scientists have found a drug combination that can trigger the self-destruct process in lung cancer cells - paving the way for new treatments, according to research that will be presented at the National Cancer Research Institute (NCRI) Cancer Conference in Liverpool next week.

When healthy cells are no longer useful they initiate a chain of events culminating in self destruction. But [cancer cells](#) swerve away from this suicide path and become immortal. This means that cells grow out of control – causing tumours to form.

The Cancer Research UK team, based at the UCL Cancer Institute, has successfully fixed this fault in [lung cancer](#) cells – reprogramming the cells to self-destruct.

Using lung cancer cells and mice the scientists showed that the combination of two drugs, called TRAIL and a CDK9 inhibitor**, altered the molecular switches in the cell suicide process – forcing the cancer cells to self-destruct.

Lead researcher, Cancer Research UK scientist Professor Henning Walczak from the UCL Cancer Institute, said: "Igniting the fuse that causes [lung cancer cells](#) to self-destruct could pave the way to a completely new treatment approach – and leave [healthy cells](#) unharmed.

"The next step of our work will see how this approach works in other cancer types, and we hope it could ultimately lead to testing this technique in trials to see if it can help patients."

Nell Barrie, senior science information manager at Cancer Research UK, said: "This important research builds on the progress we've made to understand the routes cancer cells use to stay alive. Understanding and targeting these processes will move us closer to our goal of three out of four people beating cancer within the next 20 years.

"There's an urgent need to save more lives from lung cancer and we hope these findings will one day lead to effective new treatments to help [lung cancer patients](#) and potentially those with other [cancer](#) types too."

More information: "Selective CDK9 inhibition overcomes TRAIL resistance in NSCLC." conference.ncri.org.uk/abstracts/LB052.html

Provided by Cancer Research UK

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