

Scientists find new gene linked to ovarian cancer

September 5 2013



Cancer Research UK scientists have found a gene in mice that could protect against ovarian cancer and, if faulty, may increase the chance of developing the disease, according to research published in *Nature*.

This gene, known as Helq, helps repair any damage to DNA that happens when it is copied as <u>cells</u> multiply. So if the gene is missing or faulty, DNA errors could mount up, increasing the chance of cancer developing.

The team, from Cancer Research UK's London Research Institute, found that <u>mice</u> without either of the two copies of the Helq gene were twice as likely to develop ovarian tumours, as well as becoming less fertile. And even losing just a single copy of the Helq gene was enough to cause a mouse to develop more tumours.



Dr Simon Boulton, senior author from Cancer Research UK's London Research Institute, said: "Our findings show that if there are problems with the Helq gene in mice it increases the chance of them developing ovarian and other tumours. This is an exciting finding because this might also be true for women with errors in Helq, and the next step will be to see if this is the case.

"If it plays a similar role in humans, this may open up the possibility that, in the future, women could be screened for errors in the Helq gene that might increase their risk of <u>ovarian cancer</u>."

Dr Julie Sharp, Cancer Research UK's senior science information manager, said: "This study pulls together clues from a series of experiments building a picture of cell faults that could lead to ovarian cancer in women.

"Ovarian cancer can be hard to diagnose early and treat successfully so the more we know about the causes of the disease, the better equipped we will be to detect and treat it."

In the UK around 7,000 women are diagnosed with ovarian cancer each year and around 4,300 die from the disease.

More information: Adelman, C. et al. (2013). HELQ promotes RAD51 paralogue-dependent repair to avert germ cell loss and tumorigenesis, *Nature*. <u>DOI: 10.1038/nature12565</u>

Provided by Cancer Research UK

Citation: Scientists find new gene linked to ovarian cancer (2013, September 5) retrieved 5 May 2024 from <u>https://medicalxpress.com/news/2013-09-scientists-gene-linked-ovarian-cancer.html</u>



This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.