

Scientists discover potential new target for prostate cancer treatment

February 13 2011

(PhysOrg.com) -- Scientists at the University of Glasgow have discovered how a protein present in prostate cancer cells drives growth of the disease.

Professor Hing Leung, of the University's College of Medical, Veterinary and Life Sciences, said the finding could lead to the development of better treatment for patients in future.

[Prostate cancer](#) is the most common cancer diagnosed in men in the UK. Each year 36,000 men are diagnosed with the disease - 2,500 of these are in Scotland.

The study, reported in the new edition of the *British Journal of Cancer* (published 15 February) has been described by researchers and cancer charities as “extremely exciting”.

ERK5 is a [protein](#) within a cell and works as part of the ‘information highway’ to control the growth and development of cancer.

According to Prof Leung's study, ERK5 is present in abnormally high levels of prostate cancer, including invasive cancer which has spread to other parts of the body. It is also present in relapsed cancer following previous hormone therapy.

Prof Leung explains: “When the effects of ERK5 are reduced in the laboratory, we observed less ‘invasion’ by the cancer cells. This supports

the idea that medicine or drugs blocking ERK5 might be useful in the clinic.

“In addition, when we increased the amount of ERK5 in [prostate cancer cells](#), again in the laboratory, they developed more cancer out with the prostate. This makes ERK5 a very exciting molecule to develop new treatment on.”

He continued: “The fact is prostate cancer which shows metastatic spread or that has relapsed after previous hormone treatment does not respond well to the current treatment available to patients.

“The possibility of a new target for better cancer treatment is very encouraging. Indeed ERK5 may be important, too, in other cancer types including breast cancer.”

The research was part funded by Cancer Research UK (CRUK), the Beatson Institute and the Prostate Cancer Charity.

Dr Helen Rippon, head of research management at The Prostate Cancer Charity, added: “This new research is an important step forward in helping us to understand how ERK5 is involved in driving the growth of prostate cancer, particularly the more aggressive forms of the disease.

“We look forward to following the results of these follow up studies with great interest.”

More information: “ERK5 signalling in Prostate cancer promotes an invasive phenotype” is currently on AOP - advance online publication. [www.nature.com/bjc/journal/vao ... t/full/6606062a.html](http://www.nature.com/bjc/journal/vao...t/full/6606062a.html)

Provided by University of Glasgow

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