MEDIA RELEASE

Starving Prostate Cancer Cells to Stop them from Growing

Researchers from the Centenary Institute's *Origins of Cancer Program* have discovered new links between nutrition and prostate cancer.

The research, led by the Centenary Institute's Associate Professor Jeff Host, identifies an important nutrient that is vital for helping prostate cancer cells grow. It indicates that prostate cancer cells are unable to grow if the key nutrient pumps are blocked.

Associate Professor Holst said these new findings bring us one step closer to finding a new treatment for prostate cancer.

"We now have 3 specific nutrient targets which we know are helping prostate cancer cells to grow" Associate Professor Holst said.

"If we are able to block the nutrient pumps which are feeding the cancer cells, we can essentially "starve" the cells and stop them from growing."

The Centenary Institute is now working to develop drugs aimed at effectively blocking these nutrient pumps.

"We have discovered and defined a new compound, which acts like a nozzle on a hose to block the flow of these pumps in order to starve the cancer cells," Associate Professor Holst said.

"The next step is to test this compound using a variety of prostate cancer models. We do this using human tumour samples we grow in the lab."

Current therapies for prostate cancer include surgical removal of the prostate, radiation, freezing the tumour or cutting off the supply of the hormone testosterone—but there are often side-effects including incontinence, impotence, hot flushes and weight gain. This new research brings us closer to a less invasive and more effective treatment for prostate cancer.

Associate Professor Holst said the research also supports documented patterns between prostate cancer and Western societies, suggesting diet may be the contributing factor.

"Studies have indicated that Asian and African men have much lower rates of prostate cancer compared to Western societies such as Australia, USA and Western Europe. However, when migrating to the USA, Asian and African men have similar or increased rates of prostate cancer occurrence," Associate Professor Holst said.

"Our research indicates that this pattern may be indicative of Western diets containing higher levels of red meat and dairy intake."

This project has been highly collaborative, with the Centenary Institute working closely with other researchers from Queensland University of Technology, Vancouver Prostate Centre and the University of Sydney. It is due to be published in the coming weeks in the world's leading pathology journal, *The Journal of Pathology*.

For further information about the Centenary Institute's prostate cancer research visit www.centenaryinstitute.org.au

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