New treatment option for advanced prostate cancer

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A successful interdisciplinary project is underway between two research groups, in which senior researcher Rebecka Hellsten and Professor Anders Bjartell at the Faculty of Medicine's division for Urological Cancer Research, Skane University Hospital in Malmo, and Professor Olov Sterner and Assistant Professor Martin Johansson at the Lund University division of Organic Chemistry recently published their latest research findings in the scientific online journal *PLoS ONE*.

"Prostatic tumours are thought to consist only of about 0.1 per cent cancer stem cells, but if you are not successful in eradicating that tumour cell population, there is a risk of subsequent uncontrolled growth of the tumour. The cancer stem cells are often unresponsive to both hormonal treatment and to chemotherapy, so it is essential to develop a direct treatment towards all types of cancer cells", says Anders Bjartell.

Exploring the tumour biology of prostate cancer, the research group have now observed that the protein STAT3 is active in the stem cell-like cells. In their previous studies, they have proven that the natural compound galiellalactone affects STAT3 and has inhibitory effects on the growth of prostate cancer.

Through the development of new specific STAT3-inhibitors with galiellalactone as a model, the researchers hope to develop targeted therapies that attack the stem cell-like cancer cells in prostate cancer and prevent the tumour from growing and spreading.

More information: "Galiellalactone Inhibits Stem Cell-Like ALDH-Positive Prostate Cancer Cells" www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0022118

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