

*Press release*

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Glactone Pharma innovators publish new study showing that the STAT3 inhibitor galiellalactone reduces tumor growth and metastatic spread in an animal model of prostate cancer.

**Members of Glactone Pharma’s innovator group have published an article in the highly rated scientific journal European Urology demonstrating that the STAT3 inhibitor galiellalactone (GPA500) reduces both the growth of primary prostate tumors and the metastatic spread in a model of advanced prostate cancer. This is the first study showing that the STAT3 inhibitor has a dual function through blocking both cancer cell proliferation and invasion by reducing the viability of primary tumors and metastasis in lymph nodes. With GPA500 as a lead, Glactone Pharma has developed novel proprietary STAT3 inhibitors with improved drug like properties.**

The article “The STAT3 Inhibitor Galiellalactone Effectively Reduces Tumor Growth and Metastatic Spread in an Orthotopic Xenograft Mouse Model of Prostate Cancer” is published in the journal European Urology, impact factor 13.938 (Eur Urol. 2015, doi: 10.1016/j.eururo.2015.06.016).

The data are the result of a long lasting project led by professor Anders Bjartell and senior researcher Rebecka Hellsten at the Division of Urological Cancers, Department of Translational Medicine at Lund University that looks at the role of the transcription factor STAT3 in castration resistant prostate cancer (CRPC) and inhibition of STAT3 as a new treatment for advanced prostate cancer. The model used in the new study mimics androgen-independent metastatic prostate cancer and it allowed the authors to study the effects of GPA500 on both tumor growth and metastatic spread. The reduction of metastases to regional and distal locations lymph nodes is of utmost importance since metastatic spread is the major cause of death in prostate cancer. Very few agents target the process of metastasis.

The lead author Anders Bjartell says: “This is an important step forward in our attempts to develop new treatments for advanced prostate cancer. Despite recent progress in treating this group of patients with chemotherapy and new hormonal agents, a vast majority of patients show immediate or acquired drug resistance and that is why inhibition of STAT3 and other new treatments are urgently needed”.

This peer-reviewed study further strengthens the scientific rationale for targeting STAT3 with GPA500 based drugs for the treatment of advanced prostate cancer, a disease with a large unmet medical need and few treatment options.

**Prostate cancer**

Prostate cancer (PCa) is the most common form of cancer in men in the developed world, and it ranks second in cancer-related deaths, with the vast majority of these fatalities resulting from metastatic disease. The management of prostate cancer usually involves androgen depravation treatment but when the cancer cells loses their dependency on androgens for growth the treatment becomes more difficult. At this stage, called castration-resistant prostate cancer (CRPC), the treatment options are more limited in effect and duration. There is a great need to find novel treatments that can be used either in addition to the cytotoxic drugs or, ideally, replacing them with a drug that can control the disease longer term and with less side effects. In addition, drugs that prolong the effect of androgen receptor antagonists would be a welcome addition to the treatment arsenal.

**GPA500 and STAT3**

The transcription factor STAT3 (Signal Transducer and Activator of Transcription 3) is a protein that is involved in several mechanisms of carcinogenesis including the regulation of genes involved in cell proliferation, differentiation and metabolism. Constitutively active STAT3 is known to contribute to tumor progression of prostate cancer and is considered a key factor in drug resistance, tumor immunoescape and chemoresistance. STAT3 is an ideal target for cancer therapy and inhibition of STAT3 represents a promising strategy for the treatment of patients with advanced PCa. GPA500 is a small molecule inhibitor of the transcription factor STAT3 with a unique mechanism of action. GPA500 directly inhibits STAT3 and reduces the proliferation of prostate cancer cells *in vivo* and *in vitro*. With GPA500 as a lead, Glactone Pharma has developed novel proprietary STAT3 inhibitors with improved drug like properties.

**Glactone Pharma**Glactone Pharma is a biopharmaceutical company within PULS, a unique Swedish development company in life sciences, that is based on ground-breaking science from the University of Lund. Glactone Pharma has developed a pipeline of novel potential drugs that target the STAT3 transcription factor for the treatment of castration resistant prostate cancer (CRPC) and other malignancies. STAT3 is involved in tumor mediated immune suppression (Immuno Oncology) and resistance to androgen inhibition therapy making it an ideal target in combination treatments. To read more visit [www.glactone.com](http://www.glactone.com) and [www.pulsinvest.se](http://www.pulsinvest.se).

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