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Novel Prostate Cancer Treatment

Tech ID: 23917 / UC Case 2014-008-0

ABSTRACT

Castrate Resistant Prostate Cancer is a devastating and incurable form of Prostate Cancer. Almost 50% of Prostate Cancers develop changes which lead to desensitization and resistance to conventional chemotherapies and androgen deprivation therapies such as androgen receptor inhibitors. Researchers at the University of California, Davis have found an FDA approved compound that can resensitize cells to both androgen receptor inhibitors and chemotherapy treatments alike.

FULL DESCRIPTION

Current methods for treating prostate cancer include targeting androgen receptors and with androgen antagonists, as well as androgen deprivation therapy by administering anti-androgen drugs to patients with prostate cancer. While these methods may be initially effective, they often become ineffective once a patient develops castrate-resistant prostate cancer. To date, castrate-resistant prostate cancer (CRPC) is incurable.

Patients with CRPC whose health do not improve with Chemotherapy treatments are often treated with therapies to inhibit the Androgen Receptor such as Enzalutamide and Abiraterone. However many prostate cancer patients often develop tumors which become resistant to both of these therapies. Recent studies have shown that this is partly due to expression of new variants of the Androgen Receptor on these cells... One variant that has shown great resistance to both anti-androgen drugs and androgen antagonists is Androgen Receptor Variant 7 (ARv7). Due to this, there is a great need for new methods and compositions for treating patients with CRPC or anti-androgen drug resistant prostate cancer.

Researchers at the University of California, Davis have found an FDA approved compound has allows cancer cells that resistant to chemotherapy and anti-androgen therapies to be killed. What makes this such a breakthrough is the compound is a widely used, well tolerated and off-patent FDA approved drug. Researchers have shown that in addition to inhibiting Arv7 expression, this compound also inhibits Stat3 activation, which overexpressed in most prostate cancer and promotes prostate cancer cell growth, cell migration, and cell invasion. Uniquely treatment with this compound has also shown to enhance sensitivity of prostate cancer cells with enzalutamide as well chemotherapy.

APPLICATIONS

Therapeutic for Prostate Cancer

FEATURES/BENEFITS

Reverses docetaxel and enzalutamide resistance

Well tolerated FDA approved medication

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	11,215,617	01/04/2022	2014-008

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OTHER INFORMATION

KEYWORDS

prostate cancer,
enzalutamide, docetaxel,
androgen receptor, Arv7

CATEGORIZED AS

- ▶ **Biotechnology**
 - ▶ Health
- ▶ **Medical**
 - ▶ Disease: Cancer
 - ▶ Therapeutics

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