NOVEL, POTENT ANTIANDROGEN ANALOG TO TREAT PROSTATE CANCER

Tech ID: 24502 / UC Case 2014-188-0

INVENTION NOVELTY

This invention identifies a novel analog of the antiandrogen Casodex to effectively treat prostate cancer and hormone-based syndromes.

VALUE PROPOSITION

Current drugs for treating prostate cancer and related hormone-based syndromes target the hormone-binding pocket (HBP) of the androgen receptor (AR) to inhibit its activation by endogenous hormones. These drugs are collectively known as androgen antagonists or antiandrogens. Endogenous steroid hormones (testosterone and dihydrotestosterone) bind tightly to the HBP of AR and can outcompete the binding of current antiandrogen drugs (e.g. Casodex, Flutamide, Nilutamide, Enzalutamide, ARN-509). As a result, most advanced prostate cancer patients eventually become resistant to antiandrogen therapy and succumb to the disease. Overcoming this resistance to antiandrogen drugs is a major clinical challenge. Therefore, it is imperative to develop antiandrogens having improved affinity for AR that can effectively outcompete the binding of endogenous hormones. Such drugs are expected to more effectively treat prostate cancer and other hormone-based syndromes.

This novel invention provides the following advantages:

- 10-fold higher binding affinity than Casodex, the current gold-standard
- Comparable binding affinity to the newest antiandrogen on the market (Enzalutamide)
- Improved efficacy over current drugs
- Clear pathway to additional drugs with improved potency

TECHNOLOGY DESCRIPTION

Investigators at the University of California, San Francisco have developed an analog of Casodex (i.e. bicalutamide) to treat prostate cancer and other hormone-based syndromes. This new antiandrogen exhibits 10-fold higher binding affinity for the androgen receptor than Casodex, making it comparable to Enzalutamide, the highest affinity drug currently on the market. This improved efficacy will better prevent the binding of natural hormones to androgen receptor

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OTHER INFORMATION

KEYWORDS

prostate cancer, therapeutic, androgen

CATEGORIZED AS

- Medical
  - Disease: Cancer

RELATED CASES

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and may prevent antiandrogen resistance. The chemistry and mechanism of action of this new antiandrogen indicate a clear pathway to developing additional drugs with improved potency and efficacy in treating prostate cancer and other hormone-based syndromes.

APPLICATION

Antiandrogen therapeutics

LOOKING FOR PARTNERS

To develop and commercialize this technology as an effective drug therapy for prostate cancer.

STAGE OF DEVELOPMENT

RELATED MATERIALS

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,053,433	08/21/2018	2014-188

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Novel Compounds Targeting LRH-1 for Treatment of Inflammatory Bowel Disease, Type II Diabetes, Triple Negative Breast Cancer & Pancreatic Cancer

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