TREATMENT OF PROSTATE CANCER USING ANTI-ANDROGEN SMALL MOLECULES

SUMMARY

The National Cancer Institute seeks parties interested in collaborative research to co-develop and commercialize a new class of small molecules for the treatment of prostate cancer. General information on co-development research collaborations, can be found on our web site (http://ttc.nci.nih.gov/forms).

REFERENCE NUMBER

E-015-2011

PRODUCT TYPE

- Therapeutics

KEYWORDS

- prostate cancer
- castrate resistant
- CRPC
- small molecule
- antiandrogen
- steroid hormone receptor.

COLLABORATION OPPORTUNITY

This invention is available for licensing.

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DESCRIPTION OF TECHNOLOGY

Castrate-resistant prostate cancer (CRPC) is characterized by androgen-independent cancer cells that have adapted to the depletion of hormones and continue to grow. Abnormal androgen receptor signaling is known to drive advanced castrate-resistant prostate cancer. The small molecule compounds of this invention are antiandrogens that target androgen receptor signaling in both androgen-independent and androgen-sensitive androgen receptor activity, and androgen receptors that are resistant to the current antiandrogens available. Unlike the currently available antiandrogens, the new small molecules induce androgen receptor degradation and cell death in prostate cancer cells. Further, these compounds and methods can also induce degradation of other steroid hormone receptors demonstrating the possibility

of treating a wider range of cancers.

POTENTIAL COMMERCIAL APPLICATIONS

- Series of steroid receptor compounds that cause cancer cell death
- Method of using the compounds in cancer treatment

COMPETITIVE ADVANTAGES

- First small molecule antiandrogen treatment
- Causes cell death, not just loss of function
- Potential to treat other cancers through degradation of other steroid hormone receptors

INVENTOR(S)

- Jane B Trepel Neckers (NCI), Yeong S Kim (NCI), Sunmin Lee (NCI), Vineet Kumar (NCI), Sanjay V Malhotra (NCI)

DEVELOPMENT STAGE

- Discovery (Lead Identification)

PATENT STATUS

- **U.S. Filed:** U.S. Patent Application No. 61/497,129 filed 15 Jun 2011

THERAPEUTIC AREA

- Cancer/Neoplasm