

Ultra-sensitive androgen assay

Tech ID: 24133 / UC Case 2014-057-0

INVENTION NOVELTY

This invention is a novel assay to detect and quantify androgen levels, as low as 1.5 ng/dl, in blood or serum samples.

VALUE PROPOSITION

Monitoring androgen levels is crucial for several patients. In 2006, 648,000 American men were treated for testosterone deficiency and >200,000 men were diagnosed with prostate cancer. 4-12% of American women of reproductive age suffer from polycystic ovary disease (PSOS), for which increased testosterone is a diagnostic criterion. Although decreasing in frequency, anabolic steroid abuse is still a problem. Furthermore, there is an increased need for monitoring androgen levels in the environment. Current liquid chromatography/mass spectrometry (LC/MS) techniques to measure androgen levels are costly.

TECHNOLOGY DESCRIPTION

This assay relies on the concept that the androgen receptor (AR) translocates from the cytoplasm to the nucleus when androgens are present. Patient samples are applied to cells that express androgen receptor tagged with a yellow fluorophore and a nuclear localization sequence fused to a red fluorophore. If androgens are present, yellow fluorescence overlaps with red fluorescence. The results obtained with this assay correlated with results from the same samples analyzed by standard LC/MS techniques.

APPLICATION

- Monitor androgen levels in
 - o men with testosterone deficiency
 - o prostate cancer patients being treated with anti-androgens
- Diagnose PSOS
- Detect steroid use in athletes

LOOKING FOR PARTNERS

To commercialize this diagnostic tool

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OTHER INFORMATION

CATEGORIZED AS

- ▶ **Medical**
 - ▶ Diagnostics
 - ▶ Disease: Cancer
 - ▶ Disease: Substance Abuse
 - ▶ Disease: Women's Health

RELATED CASES

2014-057-0

STAGE OF DEVELOPMENT

Fully developed diagnostic

DATA AVAILABILITY

Under NDA/CDA

Inventor's Profile

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PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,324,099	06/18/2019	2014-057

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