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# Radioligand/Theranostic to Detect Glucocorticoid Receptor Expression

Tech ID: 32899 / UC Case 2020-044-0

## TECHNOLOGY DESCRIPTION

Dysregulation of glucocorticoid receptor (GR) signaling has been implicated in Cushing's syndrome, Addison's disease, mood disorders, glomerular diseases and cancers (e.g. prostate cancer), but non-invasive biomarkers to better understand GR biology are needed.

UCSF researchers have developed a small molecule radioligand with ~100-fold more affinity for GR vs. other nuclear hormone receptors in the same family. YJH08 has sub-nM affinity for GR and binds GR on all normal tissues, including the brain. Use of this radioligand/theranostic can help identify patients most likely to respond to GR antagonists and could help develop tissue-specific GR-targeting drugs.

<sup>11</sup>C-YJH08 is currently in clinical trials at UCSF to evaluate GR expression in normal tissues and treatment resistant cancer cells (NCT04927663).

## ADVANTAGES

- Non-invasive biomarker for detecting GR expression in vivo
- Quantitative assessment in real time and multiple tissues simultaneously
- Selective for GR

## APPLICATIONS

- Clinical trials – to identify prostate cancer patients whose cancer is driven by GR activity
- Clinical trials – for development of GR antagonists as therapeutics
- Radiotracer to measure glucocorticoid receptor expression levels in vivo with PET

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## OTHER INFORMATION

### CATEGORIZED AS

- ▶ [Biotechnology](#)
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### RELATED CASES

2020-044-0

REFERENCE

Huang, Y., et al. (2020). A Novel Radioligand Reveals Tissue Specific Pharmacological Modulation of Glucocorticoid Receptor Expression with Positron Emission Tomography. *ACS chemical biology*, 15(6), 1381–1391.

<https://doi.org/10.1021/acscchembio.9b01043>

PATENT STATUS

Pending in the United States only

INVENTOR PROFILE

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PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Published Application	<a href="#">20220280661</a>	09/08/2022	2020-044

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