Prion Cell Assays for Differentiating α-Synuclein Strains in Synucleinopathies to Advance Neurodegenerative Diagnostics and Treatments

Tech ID: 34587 / UC Case 2022-035-0

TECHNOLOGY DESCRIPTION

UCSF inventors have developed an assay that differentiates conformations or strains of α-synuclein prions, which are implicated in neurodegenerative diseases such as Parkinson's disease (PD), dementia with Lewy bodies (DLB), and multiple system atrophy (MSA). By leveraging mutant α-synuclein in cultured HEK cells, this technology identifies distinct prion strains and enables precise characterization, offering new insights into disease pathogenesis and patient diagnostics. Currently in development, the assay improves the accuracy of clinical trial participant selection and retrospective analyses by reliably determining synucleinopathy subtypes. With applications in drug development, diagnostic refinement, and therapeutic targeting, this platform is poised to accelerate advances in treatments for α-synucleinopathies.

RELATED MATERIALS

- Different a-synuclein prion strains cause dementia with Lewy bodies and multiple system atrophy, PMID: 35115402 PMCID: PMC8833220 DOI: 10.1073/pnas.2113489119 - 02/08/2022

PATENT STATUS

Patent Pending

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OTHER INFORMATION

KEYWORDS

a-Synuclein Assay, Neurodegenerative Disease Diagnostics, Synucleinopathy Treatment, Prion Strain Differentiation, Parkinson's Disease Innovation

CATEGORIZED AS

- **Medical**
  - Diagnostics
  - Disease: Central Nervous System
  - New Chemical Entities, Drug Leads
  - Screening

RELATED CASES

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