Methods Of Distinguishing Ischemic Stroke From Intracerebral Hemorrhage

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ABSTRACT

Researchers at the University of California, Davis have developed new methods to differentiate different causes of stroke, including the first blood test that will allow clinicians to distinguish between ischemic stroke and intracerebral hemorrhage.

FULL DESCRIPTION

Clinicians diagnose stroke based on patient history, neurological exams and brain imaging. This can be difficult and distinguishing ischemic stroke from hemorrhage can be challenging when imaging is unavailable in the acute setting.

Blood transcriptomes have provided insights into the immune response following human stroke and show promise as diagnostic biomarkers. Furthermore, in the context of stroke, the importance of alternative splicing—which is the process whereby exons from a single gene are included or excluded in the final mRNA transcript—is supported by increasing evidence implicating alternative splicing in the pathogenesis of many diseases.

Using RNA sequencing, researchers at the University of California, Davis have performed the first studies examining whether alternative splicing can lead to improved biomarkers for stroke etiology. These studies have led to the development of improved methods for differentiating the different etiologies of stroke, including cardioembolic ischemic stroke, large vessel ischemic stroke, lacunar ischemic stroke, and intracerebral hemorrhage. This method is especially important, as it provides, for the first time, a blood biomarker-based method to explicitly differentiate ischemic stroke from hemorrhage.

APPLICATIONS

- Differentiation between causes of stroke:
  - Cardioembolic ischemic stroke
  - Large vessel ischemic stroke
  - Lacunar ischemic stroke
  - Intracerebral hemorrhage

FEATURES/BENEFITS

- Does not require imaging
- Will allow differentiation between ischemic stroke and intracerebral hemorrhage

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	11,525,161	12/13/2022	2015-533

CONTACT

Prabakaran Soundararajan
psoundararajan@ucdavis.edu
tel: .

OTHER INFORMATION

KEYWORDS

stroke, diagnostic, ischemic, intracerebral hemorrhage, blood, mRNA, transcriptome, profiling

CATEGORIZED AS

- Biotechnology
  - Health
- **Medical**
  - Diagnostics
  - Disease: Cardiovascular and Circulatory System
  - Disease: Central Nervous System

RELATED CASES

2015-533-0

University of California, Davis
Technology Transfer Office
1 Shields Avenue, Mrak Hall 4th Floor,
Davis,CA 95616

Tel:
530.754.8649
techtransfer@ucdavis.edu
https://research.ucdavis.edu/technology-transfer/
Fax:
530.754.7620