

NeurAntigen - AiE

A Novel Human Neural System for the Diagnosis of Patients with Autoimmune Encephalitis

? CLINICAL NEED / NEED

Autoimmune encephalitis (AiE) is a severe inflammatory disorder of the brain produced by an immune attack to neurons. In patients with AiE, the precise detection of **neuronal surface antibodies** in serum and cerebrospinal fluid (CSF) is key to establish a **definitive diagnosis**.

DEVELOPMENT

NeurAntigen is close to being a minimum viable product (MVP) **with TRL 4-5**. The technical feasibility of the solution has been demonstrated in the lab, and assessed by stakeholders.



GRANTS AND AWARDS

Financial support from **European Research Council** (2020), **MINECO** (2021) PoC grants and **Caixa Impulse** (2024).

INTELLECTUAL PROPERTY

European patent application filed on October 2023 and PCT extension filed on October 2024.

Applicants: Hospital Clínic de Barcelona, FRCB-IDIBAPS, IDIBELL, ICREA and UB.

THE TEAM



Dr. Eugenia Martinez



Prof. Antonella Consiglio



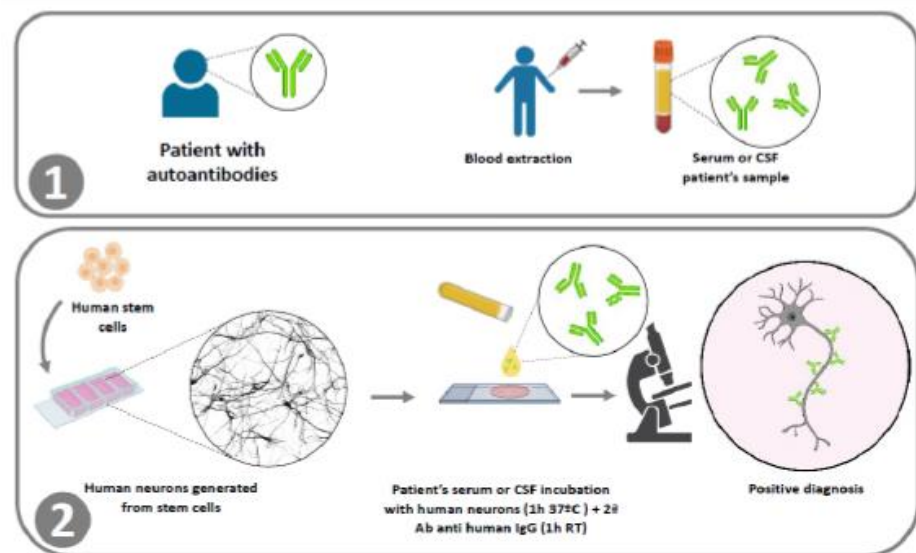
Prof. Josep Dalmau



CONTACT DETAILS

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SOLUTION and COMPETITIVE ADVANTAGE

We have developed a novel platform for the detection of antibodies based on **neurons derived from human induced pluripotent stem cells (iPSCs)**. It has significant advantages over existing technologies, with **higher sensitivity** than other widely-distributed chips (cell-based assays limited to a few antigen specificities), and **detection of an extensive repertoire** of AiE associated neuronal surface antibodies. The use of NeurAntigen kit as a first diagnostic step will **reduce unnecessary tests and costs** for patients with negative results. This innovative tool allows a **rapid and accurate diagnosis** of patients with AiE, impacting on clinical decisions, treatment and prognosis.



LOOKING FOR...

Partners for **license agreement** or **co-development**.

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