2024 ALS Organoid Program Information

Overview:

Organoids are a powerful new and compelling technology for studying disease biology. Several different and complementary organoid models currently exist with relevance to ALS, but none of these models has been tested across multiple ALS iPSC lines, and all have been created using different lines/genetic backgrounds making comparisons between/among them challenging. The reagents and assays used to assess ALS phenotypes have likewise varied. This variability and limited scale make it challenging to interpret results and to establish methodologic robustness.

ALS Finding a Cure recently issued a grant call for proposals with the following goals:

1. To enable direct comparison of results of multiple organoid methods by providing the same starting materials (iPSC lines) and reagents (antibodies) at scale
2. To identify methods that generate organoids showing key ALS phenotypes
3. To develop robust and reproducible methods that could be used for drug screening
4. To foster collaboration and sharing across organoid model developers to identify best practices, commonalities, and differences across methods

ALSFAC received 13 proposals from 5 countries (US, UK, Hungary, Germany, Canada). Proposals were reviewed by an international review committee compromised of members from academia, industry, and the non-profit sector, and 5 proposals were deemed worthy of funding (3 US and 2 international).

The projects include:

1) Longitudinal characterization of reproducible ALS phenotypes in iPSC-derive sensorimotor organoids (University of Alabama, Birmingham)
2) Benchmarking region-specific organoids and cortico-motor assembloids to study ALS (Emory University)
3) Probing consistent and reproducible pathophysiological phenotypes in the novel forebrain-spinal circuitoid models derived from ALS patients (Drexel University and UMass)
4) Characterization of the human ALS motor neuraxis organoid system for disease-modeling (University of Cambridge, UK)
5) A novel human cortico-spinal assembloid model of ALS/FTD (HUN-REN Research Centre for Natural Sciences, Hungary)

ALS Finding a Cure has now partnered with Hop On A Cure to award $1.5M in grant funding for these 2-year awards designed to advance the application of organoid technology for use in ALS translational research and development.

For further information please contact: info@aslfac.org

ALSFAC Boilerplate

HOAC Boilerplate