A new international consortium to promote stem cell-based therapy for Huntington's disease

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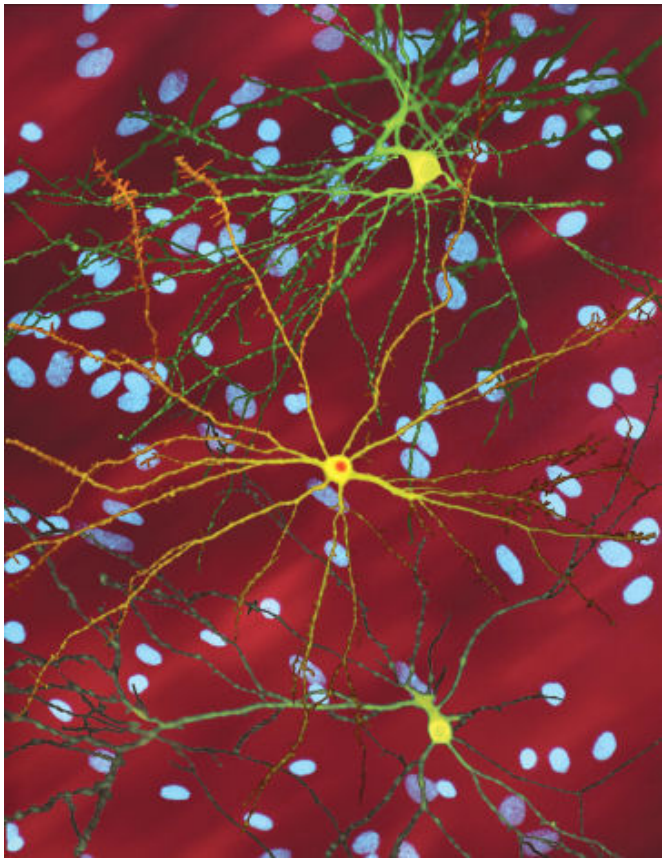

A montage of three images of single striatal neurons transfected with a disease-associated version of huntingtin, the protein that causes Huntington's disease. Nuclei of untransfected neurons are seen in the background (blue). The neuron in the center (yellow) contains an abnormal intracellular accumulation of huntingtin called an inclusion body (orange). Credit: Wikipedia/ Creative Commons Attribution 3.0 Unported license

The Stem Cells for Huntington's Disease (SC4HD) is a new international consortium created to promote advanced therapy medicinal product (ATMP) through cell transplantation studies on Huntington's Disease. The entity, made up of twenty-eight renowned researchers from ten countries, has been officially presented in a recent publication in the *Journal of Huntington's Disease*.

The main goals of SC4HD researchers are to work together with the HD community, develop criteria and guidance and address the main challenges to rapidly and safely bring potentially beneficial stem cell-based therapies to patients with this devastating disease.

According to Josep M. Canals, director of Creatio and member of the steering committee of SC4HD, "there is an exciting opportunity to apply stem cell-based therapies in Huntington's disease (HD), a devastating neurodegenerative disease that mainly affects neurons in the brain nucleus known as striatum."

To date, most experimental cell therapies have focused on the striatum aiming to replace the lost striatal neurons during the disease process. Therefore, this aims to repair the neuronal circuit and increase the survival of the remaining neuronal and glial striatal cells. Technological advances aimed to direct the differentiation of stem cells to desired neural types have opened new strategies for restoring damaged neuronal circuits in Huntington's.

The SC4H consortium brings together experts in stem cell biology, cell transplantation, clinical grade cell production, neurosurgery, and clinical evaluation. Its aim is to accelerate the safe clinical translation of stem cell therapy and to provide a comprehensive standardization and guidance for the field, spanning the full range of therapeutic considerations.

University of Barcelona participation

Josep M. Canals is a tenured university lecturer at the Department of Biomedical Sciences of the Faculty of Medicine and Health Sciences of the UB, and director of the Production and Validation Center for Advanced Therapies (Creatio), a TECNIO center for the production of Advanced Therapy Medicinal Products (ATMPs) in Catalonia. Also, he leads the Stem Cell and Regenerative research group of the UB.

Unai Perpiña, qualified person at Creatio and lecturer at the Department of Biomedicine, also participates in SC4HD.

Both researchers are members of the Institute of Neurosciences of the UB (UBNeuro), the Biomedical Research Networking Center on Neurodegenerative Diseases (CIBERNED), the August Pi i Sunyer Biomedical Research Institute (IDIBAPS) and the Spanish Network of Cell Therapy (Tercel).

More information: , Stem Cells for Huntington's Disease (SC4HD): An International Consortium to Facilitate Stem Cell-Based Therapy for Huntington's Disease, *Journal of Huntington's Disease* (2021). DOI: 10.3233/JHD-210473

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