Title: **PRODUCTION AND CHARACTERIZATION OF HUMAN NEURAL STEM CELLS FOR CLINICAL APPLICATIONS**

Authors:

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Abstract:

Cell-based approaches remain one of the most interesting areas of investigation for the development of effective experimental therapies for CNS disorders. The inherent functional plasticity of stem cells allows them to carry out a plethora of potential therapeutic actions, spanning the replacement of dead cells, immunomodulation, anti-inflammatory, trophic, homeostatic, scavenging and toxicity-blunting effects. Here we will describe our production protocol and non-clinical characterization of human fetal brain stem cells (hNSCSs) for the establishment of continuous, stable and standardized cell lines that are amenable for certification under clinical good manufacturing practice standards. We will also illustrate the establishment of hNSCs from induced pluripotent human cells (hiNSCs) and their comparison to native hNSCs.