



Improving the Effectiveness and Safety of Cell Reprogramming in Brain Regeneration

REGENERAR is a Horizon Europe project focused on developing a non-viral formulation to reprogram certain brain cells into functional neurons

Facts about the project



2,943,233.00

Total Budget



48 months

Project duration



1st March 2024

Start Date

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The challenge

Stroke and neurodegenerative diseases leave millions of people worldwide with significant limitations in their daily lives. These outcomes result from the limited capacity of the central nervous system to repair itself and replace lost neurons.

Our ambition

REGENERAR aims to revolutionize the treatment of neurological disorders and promote brain repair by reprogramming glial cells into neurons. This will be achieved by developing a non-viral formulation to reprogram glial cells into neurons with an unprecedented level of efficiency and safety.

Our approach

The **REGENERAR** consortium will evaluate the viability of brain cell reprogramming for clinical use by integrating:

- ✦ Advanced formulations for the treatment of brain diseases
- ✦ Rigorous safety testing using advanced *in vitro* cellular models and *in vivo* animal models
- ✦ Preclinical development in compliance with good laboratory practices (GLP)

Project outcomes

- ✦ Development of a non-viral formulation for brain cell reprogramming
- ✦ Proof-of-concept demonstration of brain cell reprogramming both *in vitro* and *in vivo*
- ✦ Advancement of knowledge and education in cellular reprogramming