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19

HUMAN iPSC-DERIVED CELLS: A POWERFUL TOOL FOR NEUROPATHIC PAIN DISEASE MODELLING

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Facts & Figures

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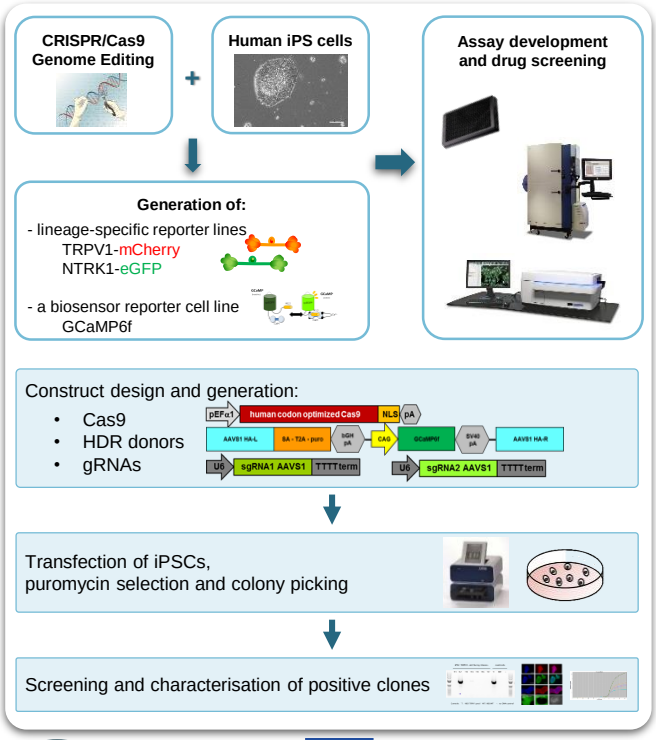
EFPIA in kind:	1 550 000 €
Other:	0 €
Total Cost:	3 050 000 €
Project website:	ngn-pet.com

Challenge

Chronic neuropathic pain (NP) is a condition with highly unmet medical need.
Human induced pluripotent stem cell (hiPSC) technology is emerging as a potent tool to understand the pathophysiology of NP and to develop new therapies.

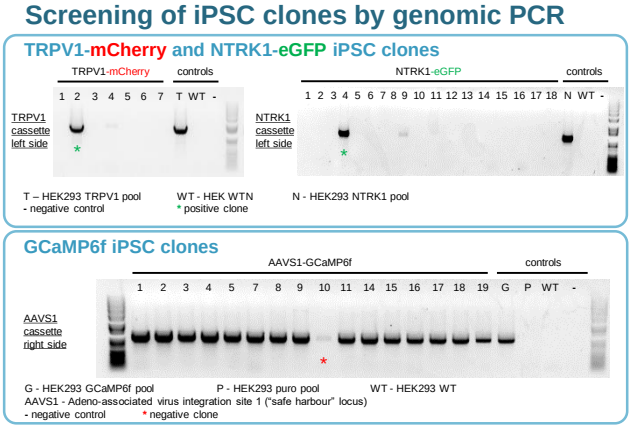
Modelling Neuron-Glia Networks | Drug Discovery Platform | Pain Efficacious Treatments

Approach & Methodology

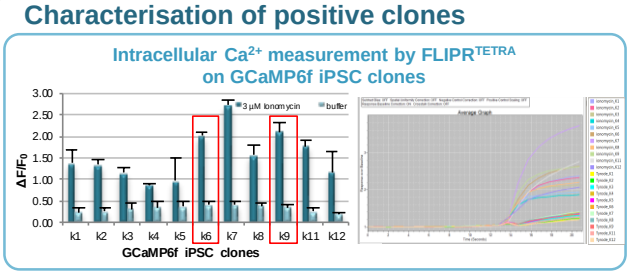


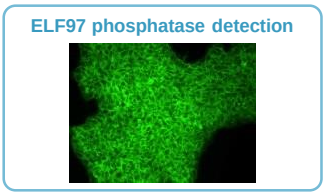
Results

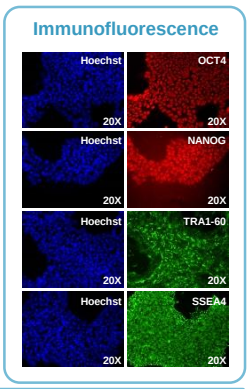
Screening of iPSC clones by genomic PCR

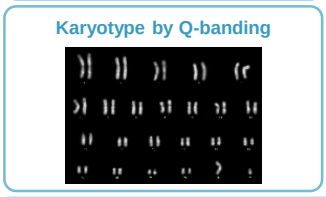


Characterisation of positive clones









Representative characterisation of GCaMP6f K6 clone

Value of IMI collaboration

Two SMEs (Axxam and Life&Brain) with consolidated expertise in the fields of iPSCs and screening systems, in partnership with academia (KCL, NMI) and pharmaceutical companies (Esteve, Grünenthal) are contributing their knowhow and infrastructure to setting up *in vitro* models for pain research and drug discovery.

Impact & take home message

The generation of reporter iPSC lines will be helpful for understanding the NP-relevant pathways, for establishing a human *in vitro* high content/high throughput screening assay platform and for identifying novel therapeutic molecules for NP.

imi innovative medicines initiative efpia

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