The Neuro’s Early Drug Discovery Unit (EDDU)

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Induced Pluripotent Stem cells
From patients to human brain cells

2D neuronal and glial cells

3D brain organoids/neurospheres
Opening up the potential of iPSCs

• Making our iPSCs accessible to all

• Training users how working with them

• Working with academics and industry to unlock the potential of iPSCs for discovery and translation with OS at the core
Intersecting models

- 3D organoids
- Preclinical models
- Disease modelling in a dish
- Clinical trials
- Re-programming
- Donated or acquired somatic cells
- Induced pluripotent stem cells (iPSCs)
Different CNS diseases >>>>> Different CNS cell types

3D: Cerebral organoids
2D: Cortical neurons
2D: Astrocytes/Microglia
2D: Motor neurons
3D: Moto spheres
3D: Midbrain organoids
2D: Dopaminergic neurons

PD
ALS
ID/ASDs
Making our methods accessible

- Established a database of >20 open protocols

- Development of new video protocols (35+ videos) for open sharing and training.
  
  https://www.neuro-edduportal.com/

- Video translations across 4 languages with new videos and languages coming
  
  https://www.mcgill.ca/neuro/research/eddu/resources#videos
Progress since 2015

- 35+ Team members
- 300+ Users trained
- 80+ Academic collaborators
- 140+ iPSCs made
- 50+ Protocols and training videos
- 45+ Open Access peer reviewed publications
- 25+ industry partnerships
- > 90 Academic partnered projects
- 30k+ views/downloads of written methods/video protocols
- An in-house OS catalog of 160+ iPSCs
THANK YOU

QUESTIONS/COMMENTS

https://www.mcgill.ca/neuro/research/eddu