Creatio | Production and validation center of advanced therapies
UNIVERSITAT DE BARCELONA

Research models and techniques

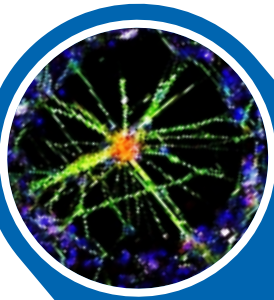
IN VITRO MODELS

Human stem cell (hiPSC/hESC) differentiation (cortical, dopaminergic and striatal neurons)

In vitro models:

- 2D human stem cell models
- Brain-on-a-chip model
- 3D bioprinting model

Primary mouse cultures: Astrocytes and neurons



MOUSE MODELS

Alzheimer: 5xFAD (Amyloidosis) and p301S (TAUpathy) models

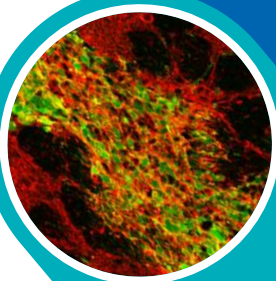
Major depression: Chronic stress model

Huntington's disease: R6/1 and HdhQ111/7 mouse model

Epilepsy: Pilocarpine model

Schizophrenia: Ketamine model, LPS model

Chimeric human (hSC)-mouse models



IN VITRO APPROACHES

Gene editing systems

Direct reprogramming

Optogenetics & calcium imaging

Omics and machine learning (*in silico* models)

High throughput drug screening:

- Multi-electrodes arrays: Electrophysiological assessment of drug effects
- Opera system: Automated confocal microscopy for evaluating drug effects across multiple plates

IN VIVO APPROACHES

Drug administration (oral/iv/ip/sub cutaneous, intravitreal, etc)

Cell transplants

In utero electroporation

Animal behavior

In vivo gene editing systems

UNIVERSITAT DE BARCELONA

ACCIÓ Generalitat de Catalunya | tecnio catalonia

ISO 9001 SYSTEM CERTIFICATION SGS

GOOD LABORATORY PRACTICE GLP

GOOD MANUFACTURING PRACTICE GMP

agencia española de medicamentos y productos sanitarios

We ensure all projects comply with applicable UNE-EN-ISO 9001, GLP and/or GMP guidelines, and the Creatio Quality System.