Revolutionary high-resolution human 3D brain organoid platform integrating AI-based analytics

Fact Sheet

Project Information

3D-BrAIn
Grant agreement ID: 101098791

Funded under
The European Innovation Council (EIC)

DOI
10.3030/101098791

Total cost
€ 2 003 347,50

EU contribution
€ 1 998 347,00

ERASMUS UNIVERSITAIR MEDISCH CENTRUM
ROTTERDAM
Netherlands

Project description

A bio-digital twin model of the human brain to change the face of precision medicine

Bio-digital twin models of the human brain comprise a cutting-edge technology that aims to create a miniaturised cellular model of an individual’s brain using a combination of stem cell technology and advanced analysis of neural network activity. Funded by the European Innovation Council and led by a consortium of scientists, the 3D-BrAIn project will develop a bio-digital twin model of the human brain that is personalised, precise and predictive. Its overall mission is to
revolutionise personalised precision medicine for central nervous system disorders. Specifically, the project will combine three ground-breaking technologies: a novel human brain modelling technology using 3D cortical organoid cultures, a state-of-the-art 3D multi-electrode array technology for high-resolution electrophysiological recordings, and tailored automated machine learning algorithms to analyse large data sets.

Fields of science

natural sciences > biological sciences > neurobiology
medical and health sciences > basic medicine > pharmacology and pharmacy > drug discovery
medical and health sciences > clinical medicine > ophthalmology
medical and health sciences > health sciences > personalized medicine
natural sciences > computer and information sciences > artificial intelligence > machine learning

Keywords

3D Brain organoids microelectrode arrays personalized precision medicine
artificial intelligence (AI) machine learning

Programme(s)

HORIZON.3.1 - The European Innovation Council (EIC)

Topic(s)

HORIZON-EIC-2022-PATHFINDEROPEN-01-01 - EIC Pathfinder Open 2022

Call for proposal

HORIZON-EIC-2022-PATHFINDEROPEN-01

See other projects for this call
Funding Scheme

**EIC - EIC**

Coordinator

**ERASMUS UNIVERSITAIR MEDISCH CENTRUM ROTTERDAM**

Net EU contribution

€ 1 133 750,00

Address

Dr molewaterplein 40
3015 GD Rotterdam
Netherlands

Region

West-Nederland > Zuid-Holland > Groot-Rijnmond

Links

Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding

€ 0,00

Participants (2)

**UNIVERSITA DEGLI STUDI DI GENOVA**

Italy

Net EU contribution

€ 467 097,00

Address

Via balbi 5
16126 Genova

Region

Nord-Ovest > Liguria > Genova

Activity type

Higher or Secondary Education Establishments
MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN EV

Germany

Net EU contribution
€ 397 500,00

Address
Hofgartenstrasse 8
80539 München

Region
Bayern > Oberbayern > München, Kreisfreie Stadt

Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Other funding
€ 0,00

3BRAIN AG

Switzerland

Net EU contribution
€ 0,00

Address
Huobstrasse 16
8808 Pfaffikon

SME
Yes

Region
Schweiz/Suisse/Svizzera > Zentralschweiz > Schwyz

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Other funding
€ 0,00

EC signature date 17 November 2022
Last update: 24 May 2023

Permalink: https://cordis.europa.eu/project/id/101098791

European Union, 2023