Learning Isoform Fingerprints to Discover the Molecular Diversity of Life

Fact Sheet

Project Information

ORIGIN

Grant agreement ID: 101077037

DOI
10.3030/101077037

EC signature date
15 December 2022

Start date
1 June 2023

End date
31 May 2028

Funded under
European Research Council (ERC)

Total cost
€ 1 498 939,00

EU contribution
€ 1 498 939,00

Investment in EU policy priorities

Digital agenda	○	Clean air	○
Artificial Intelligence	○	Climate action	○
Biodiversity	○		

Coordinated by
TECHNISCHE UNIVERSITAET MUENCHEN
Germany

Project description

Innovative proteomics data analysis to comprehensively identify protein isoforms

Protein isoforms, which are different versions of a protein from a single gene, contribute to the molecular diversity of life. However, comprehensive evidence on

protein isoforms at the protein level is lacking because up to 80 % of all proteomic data remain unused during analysis. To overcome this challenge, the ERC-funded ORIGIN project proposes a new approach that relies on the discovery of the deterministic multidimensional fingerprints (ORIGINs) protein isoforms generate in proteomic measurements. The project will systematically identify protein isoforms by leveraging a novel proteomics data analysis strategy based on mass spectrometry. The approach involves training deep neural networks in order to predict ORIGINs which are subsequently used to identify and quantify protein isoforms.

Fields of science (EuroSciVoc)

natural sciences > biological sciences > biochemistry > biomolecules > proteins > **proteomics**

Programme(s)

HORIZON.1.1 - European Research Council (ERC) MAIN PROGRAMME

Topic(s)

ERC-2022-STG - ERC STARTING GRANTS

Call for proposal

ERC-2022-STG

See other projects for this call

Funding Scheme

HORIZON-ERC - HORIZON ERC Grants

Host institution

TECHNISCHE UNIVERSITAET MUENCHEN

Net EU contribution

€ 1 498 939,00

Total cost

€ 1 498 939,00

Address

Arcisstrasse 21
80333 Muenchen
Germany

Region

Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type

Higher or Secondary Education Establishments

Links

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

Beneficiaries (1)

TECHNISCHE UNIVERSITAET MUENCHEN

Germany

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Last update: 19 January 2023

Permalink: https://cordis.europa.eu/project/id/101077037