



# Learning Isoform Fingerprints to Discover the Molecular Diversity of Life

## Fact Sheet

### Project Information

#### ORIGIN

Grant agreement ID: 101077037

#### DOI

[10.3030/101077037](https://doi.org/10.3030/101077037)

#### EC signature date

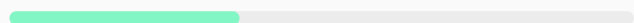
15 December 2022

#### 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          | <input type="radio"/> | Clean air      | <input type="radio"/> |
| Artificial Intelligence | <input type="radio"/> | Climate action | <input type="radio"/> |
| Biodiversity            | <input type="radio"/> |                |                       |

#### 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 UNIVERSITÄT MÜNCHEN

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)

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### TECHNISCHE UNIVERSITAET MUENCHEN

 **Germany**

Net EU contribution

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Total cost

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**Last update:** 19 January 2023

**Permalink:** <https://cordis.europa.eu/project/id/101077037>

European Union, 2025

