Deciphering and Engineering the overlooked but Universal phenomenon of Subpopulations in BIOtechnology

Fact Sheet

Project Information

DEUSBIO

Grant agreement ID: 949080

Funded under
EXCELLENT SCIENCE - European Research Council (ERC)

Start date
1 March 2021

End date
28 February 2026

Total cost
€ 1 499 998,00

EU contribution
€ 1 499 998,00

Coordinated by
IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE
United Kingdom

Project description

Shedding light on the phenomenon of subpopulations

For all types of cells, genetically identical populations can form metabolically distinct subpopulations. However, the emergence of subpopulations has been largely overlooked in biotechnology. The EU-funded DEUSBIO project will explore the emergence of subpopulations in yeast. Using new synthetic biology tools, the project will try to identify their implications in metabolism and bioproduction. It will also create an innovative framework to maximise the biosynthesis of high value molecules. The
findings of this project will stretch beyond bioproduction, with implications in biomedicine, cancer heterogeneity and microbiome complexity.

Fields of science

natural sciences > biological sciences > synthetic biology
social sciences > economics and business > economics > production economics > productivity
medical and health sciences > clinical medicine > oncology
natural sciences > biological sciences > microbiology
medical and health sciences > medical biotechnology > cells technologies

Keywords

- synthetic biology
- metabolic engineering
- microbial bioproduction
- microbial biotechnology
- microbial cell factories

Programme(s)

H2020-EU.1.1. - EXCELLENT SCIENCE - European Research Council (ERC)

Topic(s)

ERC-2020-STG - ERC STARTING GRANTS

Call for proposal

ERC-2020-STG

See other projects for this call

Funding Scheme

ERC-STG - Starting Grant
Coordinator

IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

Net EU contribution
€ 1 499 998,00

Address
South kensington campus exhibition road
SW7 2AZ London

Region
London > Inner London — West > Westminster

Activity type
Higher or Secondary Education Establishments

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

Other funding
€ 0,00

Beneficiaries (1)

IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

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Last update: 17 July 2023

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European Union, 2023