

Imperial College London Participation

European Innovation Council (EIC)

Table of contents

Quantitative Ultrasound Stochastic Tomography - Revolutionizing breast cancer diagnosis and screening with supercomputing-based radiation-free imaging.	2
Dynamic Spatio-Temporal Modulation of Light by Phononic Architectures	8
Molecular Storage System (MoSS): Intelligent DNA Data Storage	19
Green H ₂ and circular bio-coal from biowaste for cost-competitive sustainable Steel	23
Living Therapeutic and Regenerative Materials with Specialised Advanced Layers	30
Supervised morphogenesis in gastruloids	34
SKIN MICROBIAL DEVICES	41
A revolutionary cell programming platform based on the targeted nano-delivery of a transposon gene editing system	46
Next Generation Molecular Data Storage	52
Enabling advances in diagnosis, patient stratification and treatment for dilated cardiomyopathy patients and families.	58
DNA Microfactory for Autonomous Archiving	65

Introduction

This booklet comprises the Horizon Europe Projects under the European Innovation Council that Imperial participates in as an Associated Partner. Funding from UKRI Horizon Guarantee.

Quantitative Ultrasound Stochastic Tomography - Revolutionizing breast cancer diagnosis and screening with supercomputing-based radiation-free imaging.

Fact Sheet

Project Information

QUSTom

Grant agreement ID: 101046475

DOI

[10.3030/101046475](https://doi.org/10.3030/101046475)

EC signature date

21 April 2022

Start date

1 April 2022

End date

30 September 2024

Funded under

The European Innovation Council (EIC)

Total cost

€ 2 744 300,00

EU contribution

€ 2 744 300,00

Coordinated by

BARCELONA

SUPERCOMPUTING CENTER

CENTRO NACIONAL DE

SUPERCOMPUTACION



Spain

Project description

Innovative algorithms revolutionise ultrasound breast cancer imaging

Algorithms developed in the field of geophysical imaging can be used to enhance information from ultrasound imaging in medical applications. The adjoint-state

modelling and iterative optimisation will provide quantitative images of human tissue with very high resolution. The EU-funded QUSTom project will investigate the possibility to apply the fundamental science behind adjoint-based uncertainty imaging for breast cancer diagnosis. This feasibility study of the technology as a diagnostic tool will cover the adaptation of data acquisition hardware for optimal resolution, application of the algorithms in high-performance computers, and final feasibility analysis by radiologists as a comparison with the current state-of-the-art imaging in breast cancer diagnostic.

Fields of science

[natural sciences](#) > [computer and information sciences](#) > **[software](#)**

[medical and health sciences](#) > [clinical medicine](#) > [oncology](#) > **[breast cancer](#)**

[engineering and technology](#) > [medical engineering](#) > **[diagnostic imaging](#)**

[natural sciences](#) > [physical sciences](#) > [acoustics](#) > **[ultrasound](#)**

Keywords

[Ultrasound tomography](#)

[full-waveform inversion](#)

[uncertainty quantification](#)

[breast cancer diagnosis](#)

[breast cancer screening](#)

[supercomputing](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#)

MAIN PROGRAMME

[HORIZON.3.1.1 - The Pathfinder for Advanced Research](#)

Topic(s)

[HORIZON-EIC-2021-PATHFINDEROPEN-01-01 - EIC Pathfinder Open 2021](#)

Call for proposal

[HORIZON-EIC-2021-PATHFINDEROPEN-01](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



BARCELONA SUPERCOMPUTING CENTER CENTRO NACIONAL DE SUPERCOMPUTACION

Net EU contribution

€ 737 303,75

Address

Calle jordi girona 31

08034 Barcelona

 Spain 

Region

Este > Cataluña > Barcelona

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00

Participants (4)



KARLSRUHER INSTITUT FUER TECHNOLOGIE

 Germany

Net EU contribution

€ 974 750,00

Address

Kaiserstrasse 12

76131 Karlsruhe 

Region

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



FUNDACIO HOSPITAL UNIVERSITARI VALL D'HEBRON - INSTITUT DE RECERCA

 Spain

Net EU contribution

€ 400 871,25

Address

Passeig vall d hebron 119-129 edificio de recerca
08035 Barcelona 

Region

Este > Cataluña > Barcelona

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



FRONTWAVE IMAGING SL

 Spain

Net EU contribution

€ 427 375,00

Address

Barcelona health hub pabellon de san manuel oficin calle sant antoni maria claret 167
08025 Barcelona 

SME 

Yes

Region

Este > Cataluña > Barcelona

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



ARCTUR RACUNALNISKI INZENIRING DOO

 Slovenia

Net EU contribution

€ 204 000,00

Address

Industrijska cesta 1a

5000 Nova gorica 

SME 

Yes

Region

Slovenija > Zahodna Slovenija > Goriška

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00

Partners (1)



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 24 August 2022

Permalink: <https://cordis.europa.eu/project/id/101046475>

European Union, 2024

Dynamic Spatio-Temporal Modulation of Light by Phononic Architectures

Fact Sheet

Project Information

Dynamo

Grant agreement ID: 101046489

DOI

[10.3030/101046489](https://doi.org/10.3030/101046489) 

EC signature date

25 March 2022

Start date

1 March 2022

End date

28 February 2026

Funded under

The European Innovation Council (EIC)

Total cost

€ 2 552 277,50

EU contribution

€ 2 552 277,50

Coordinated by

UNIVERSITAT JAUME I DE
CASTELLON



Spain

Project description

Transforming imaging with simultaneous light modulation

Many products and devices depend on imaging technology, from projection displays to remote sensors. The EU-funded DYNAMO project hopes to achieve a new paradigm in imaging techniques by creating spatial light modulators which can operate simultaneously. Conventional spatial light modulators operate sequentially: a beam of light is shaped into different patterns, and the time interval between patterns is governed by the refresh rate of the device. Instead, researchers propose sending all patterns in one short nanosecond pulse, creating a dynamic spatiotemporal light modulation device. This will result in ultra-fast imaging with a refresh rate for dynamic pixels equivalent to that of the GHz range.

Fields of science

[natural sciences](#) > [physical sciences](#) > **[acoustics](#)**

[natural sciences](#) > [physical sciences](#) > **[optics](#)**

Keywords

[Phononic crystals](#)

[phononic plates](#)

[phonics](#)

[disordered structures](#)

[nanomaterials](#)

[optoacoustics](#)

[imaging](#)

[spatial light modulators](#)

[compressive sensing](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#)

MAIN PROGRAMME

[HORIZON.3.1.1 - The Pathfinder for Advanced Research](#)

Topic(s)

[HORIZON-EIC-2021-PATHFINDEROPEN-01-01 - EIC Pathfinder Open 2021](#)

Call for proposal

[HORIZON-EIC-2021-PATHFINDEROPEN-01](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



UNIVERSITAT JAUME I DE CASTELLÓN

Net EU contribution

€ 876 027,50

Address

Avenida vicent sos baynat s/n
12006 Castellon de la plana

 **Spain** 

Region

Este > Comunitat Valenciana > Castellón/Castelló

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

Participants (5)

 **THIRD-PARTY** 

FUNDACION UNIVERSITAT JAUME I-EMPRESA

 **Spain**

Net EU contribution

€ 82 387,50

Address

Edificio consell social campus de riu sec avenida sos baynat sn
12071 Castellon 

Region

Este > Comunitat Valenciana > Castellón/Castelló

Activity type

Other

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS

 Spain

Net EU contribution

€ 696 980,00

Address

Calle serrano 117

28006 Madrid 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS

 France

Net EU contribution

€ 479 412,50

Address

Rue michel ange 3

75794 Paris 

Region

Ile-de-France > Ile-de-France > Paris

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00

 **THIRD-PARTY** 

SORBONNE UNIVERSITE

 France

Net EU contribution

€ 125 220,00

Address

21 rue de l'ecole de medecine

75006 Paris 

Region

Ile-de-France > Ile-de-France > Paris

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



AKADEMIA GORNICZO-HUTNICZA IM. STANISLAWA STASZICA W KRAKOWIE

 Poland

Net EU contribution

€ 292 250,00

Address

Al adama mickiewicza 30

30-059 Krakow 

Region

Makroregion południowy > Małopolskie > Miasto Kraków

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

Partners (9)



ASSOCIATION EUROPEENNE DES AGENCESDE DEVELOPPEMENT

 Belgium

Net EU contribution

€ 0,00

Address

Rue montoyer 24/13

1000 Bruxelles / brussel 

Region

Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest > Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest > Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad

Activity type

Other

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00




FUNDACION PARA EL FOMENTO DE LA INVESTIGACION SANITARIA Y BIOMEDICA DE LA COMUNITAT VALENCIANA

 Spain

Net EU contribution

€ 0,00

Address

Calle micer masco 31
46010 Valencia 

Region

Este > Comunitat Valenciana > Valencia/València

Activity type

Research Organisations

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00




INSTITUTO VALENCIANO DE LA COMPETITIVIDAD EMPRESARIAL

 Spain

Net EU contribution

€ 0,00

Address

Calle de la democracia 77
46018 Valencia 

Region

Este > Comunitat Valenciana > Valencia/València

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



FINNOVAREGIO

 Belgium

Net EU contribution

€ 0,00

Address

Avenue des arts 56

1000 Bruxelles / brussel 

Region

Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest > Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest > Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad

Activity type

Other

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



Institut d'électronique de microélectronique et de nanotechnologie 

 France

Net EU contribution

€ 0,00

Address

City scitifique, avenue henri poincare, vellivue d'ascq, cnrs umr8520

59652 Lille 

Region

Hauts-de-France > Nord-Pas de Calais > Nord

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



UNIVERSITE PIERRE ET MARIE CURIE 

 France

Net EU contribution

€ 0,00

Address

Place jussieu 4
75252 Paris 

Region

Ile-de-France > Ile-de-France > Paris

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00




HOLOEYE PHOTONICS AG

 Germany

Net EU contribution

€ 0,00

Address

Volmerstrasse 1
12489 Berlin 

SME 

Yes

Region

Berlin > Berlin > Berlin

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



SORBONNE UNIVERSITE 

 France

Net EU contribution

€ 0,00

Address

21 rue de l'ecole de medecine

75006 Paris 

Region

Ile-de-France > Ile-de-France > Paris

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



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 23 August 2022

Permalink: <https://cordis.europa.eu/project/id/101046489>

European Union, 2024

Molecular Storage System (MoSS): Intelligent DNA Data Storage

Fact Sheet

Project Information

MoSS

Grant agreement ID: 101058035

DOI

[10.3030/101058035](https://doi.org/10.3030/101058035)

EC signature date

11 April 2022

Start date

1 May 2022

End date

30 April 2024

Funded under

The European Innovation Council (EIC)

Total cost

€ 2 594 615,00

EU contribution

€ 2 594 615,00

Coordinated by

HELIXWORKS TECHNOLOGIES
LIMITED

 Ireland

Project description

Archiving information in DNA

Storing data in DNA is an attractive option given the stability of the molecule at room temperature compared to data centres. Importantly, DNA can archive several hundred megabytes of information in a minute space. The only pitfalls are the cost and speed of transferring data to and from DNA molecules. To resolve this issue, the MoSS project funded by the European Innovation Council proposes to develop an automated DNA storage system based on a novel enzymatic technique for the high-throughput synthesis of DNA. This method takes into account the fact that data storage in DNA does not require precise and error-free synthesis, which renders the process more affordable.

Fields of science

[natural sciences](#) > [biological sciences](#) > **[synthetic biology](#)**

[natural sciences](#) > [biological sciences](#) > [genetics](#) > **[DNA](#)**

[natural sciences](#) > [biological sciences](#) > [biochemistry](#) > [biomolecules](#) > **[proteins](#)**

[natural sciences](#) > [biological sciences](#) > [genetics](#) > **[nucleotides](#)**

[natural sciences](#) > [biological sciences](#) > [molecular biology](#) > **[structural biology](#)**

Keywords

[DNA](#)

[storage](#)

[databases](#)

[sequencing](#)

[synthesis](#)

[archival data](#)

[automation](#)

[structured data](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#)

MAIN PROGRAMME

Topic(s)

[HORIZON-EIC-2021-TRANSITIONOPEN-01 - EIC Transition Open 2021](#)

Call for proposal

[HORIZON-EIC-2021-TRANSITIONOPEN-01](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



HELIXWORKS TECHNOLOGIES LIMITED

Net EU contribution

€ 2 270 000,00

Address

Lee road

T23XE10 Cork

 Ireland 

SME 

Yes

Region

Ireland > Southern > South-East

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00

Participants (1)



EURECOM GIE

 France

Net EU contribution

€ 324 615,00

Address

Route des chappes 450 campus sophia antipolis

06410 Biot 

Region

Provence-Alpes-Côte d'Azur > Provence-Alpes-Côte d'Azur > Alpes-Maritimes

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

Partners (1)



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 25 August 2022

Permalink: <https://cordis.europa.eu/project/id/101058035>

European Union, 2024

Green H2 and circular bio-coal from biowaste for cost-competitive sustainable Steel

Fact Sheet

Project Information

H2STEEL

Grant agreement ID: 101070741

DOI

[10.3030/101070741](https://doi.org/10.3030/101070741)

EC signature date

1 June 2022

Start date

1 October 2022

End date

30 September 2025

Funded under

The European Innovation Council (EIC)

Total cost

€ 2 368 910,00

EU contribution

€ 2 368 910,00

Coordinated by

POLITECNICO DI TORINO

 Italy

Project description

Biocoal can make steel mills greener

Steel mills and metallurgical plants pose a significant challenge to reaching net-zero carbon emissions. The EU-funded H2STEEL project hopes to offer a solution by converting biowaste and biomethane into green hydrogen, carbon, and critical raw materials through a new type of catalysed pyrolysis. Using a newly designed reactor employing a novel catalyst, biomethane can be converted to green hydrogen in a low-cost way. Derived materials can then be used in steelmaking processes. This innovative solution avoids the release of CO₂ and results in a net reduction of greenhouse gases.

Fields of science

[natural sciences](#) > [chemical sciences](#) > **[catalysis](#)**

[engineering and technology](#) > [chemical engineering](#) > **[chemical process engineering](#)**

[engineering and technology](#) > [environmental engineering](#) > **[energy and fuels](#)**

[engineering and technology](#) > [materials engineering](#) > **[metallurgy](#)**

Keywords

[Steelmaking](#)

[biocoal](#)

[sludge](#)

[biowaste treatment](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#)

MAIN PROGRAMME

Topic(s)

[HORIZON-EIC-2021-PATHFINDERCHALLENGES-01-04 - Novel routes to green hydrogen production](#)

Call for proposal

[HORIZON-EIC-2021-PATHFINDERCHALLENGES-01](#)

[See other projects for this call](#)

Funding Scheme

[EIC - EIC](#)

Coordinator



POLITECNICO DI TORINO

Net EU contribution

€ 824 375,00

Address

Corso duca degli abruzzi 24

10129 Torino

 **Italy** 

Region

Nord-Ovest > Piemonte > Torino

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

Participants (5)



CONSORZIO PER LA RICERCA E LA DIMOSTRAZIONE SULLE ENERGIE RINNOVABILI

 **Italy**

Net EU contribution

€ 638 975,00

Address

Viale Kennedy 182

50038 Scarperia e san piero 

Region

Centro (IT) > Toscana > Firenze

Activity type

Research Organisations

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



UNIVERSITEIT LEIDEN

 Netherlands

Net EU contribution

€ 372 750,00

Address

Rapenburg 70

2311 EZ Leiden 

Region

West-Nederland > Zuid-Holland > Agglomeratie Leiden en Bollenstreek

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



SOCIETA PER LA GESTIONE DELL' INCUBATORE D' IMPRESA DEL POLITECNICO SCPA

 Italy

Net EU contribution

€ 200 090,00

Address

Corso castelfidardo 30 a

10129 Torino 

Region

Nord-Ovest > Piemonte > Torino

Activity type

Other

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



CONTACTICA SL

Spain

Net EU contribution

€ 223 012,50

Address

Calle canchal 8 local 3
28021 Madrid

SME

Yes

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

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



ARCELORMITTAL MAIZIERES RESEARCH

France

Net EU contribution

€ 109 707,50

Address

Immeuble le cezanne 6 rue andre campra
93200 Saint denis

Region

Ile-de-France > Ile-de-France > Seine-Saint-Denis

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

Partners (1)



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 26 August 2022

Permalink: <https://cordis.europa.eu/project/id/101070741>

Living Therapeutic and Regenerative Materials with Specialised Advanced Layers

Fact Sheet

Project Information

NextSkins

Grant agreement ID: 101071159

DOI

[10.3030/101071159](https://doi.org/10.3030/101071159) 

EC signature date

27 June 2022

Start date

1 November 2022

End date

31 October 2027

Funded under

The European Innovation Council (EIC)

Total cost

€ 2 856 441,00

EU contribution

€ 2 856 441,00

Coordinated by

TECHNISCHE UNIVERSITEIT

DELFT

 Netherlands

Project description

Skin-inspired living materials

Compared to conventional materials, biomaterials encountered in living organisms are characterised by specific architecture, organisation and often exhibit multiple functions. Engineered living materials (ELMs) have emerged at the cornerstone of synthetic biology and material science to produce materials with improved functions because of the living organisms within them. Funded by the European Innovation Council, the NextSkins project is inspired by the structure/function of the many layers of skin. Researchers will mimic the specialised skin arrangement to make two

engineered living materials: one with a therapeutic function to treat skin diseases and one with a regenerative function to be used as a protective garment in sports.

Fields of science

[natural sciences](#) > [biological sciences](#) > [microbiology](#) > **[bacteriology](#)**

[medical and health sciences](#) > [clinical medicine](#) > **[dermatology](#)**

[natural sciences](#) > [biological sciences](#) > [biochemistry](#) > **[biomolecules](#)**

[engineering and technology](#) > [materials engineering](#) > **[ceramics](#)**

Keywords

[engineered living materials](#)

[adaptive materials](#)

[genetic engineering](#)

[protein materials](#)

[bacterial cellulose](#)

[composite](#)

[self-assembly](#)

[encapsulation](#)

[biomineralization](#)

[material-driven design](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#)

MAIN PROGRAMME

Topic(s)

[HORIZON-EIC-2021-PATHFINDERCHALLENGES-01-05 - Engineered Living Materials](#)

Call for proposal

[HORIZON-EIC-2021-PATHFINDERCHALLENGES-01](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



TECHNISCHE UNIVERSITEIT DELFT

Net EU contribution

€ 1 901 469,75

Address

**Stevinweg 1
2628 CN Delft**

 **Netherlands** 

Region

West-Nederland > Zuid-Holland > Delft en Westland

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

Participants (1)



AALTO KORKEAKOULUSAATIO SR

 **Finland**

Net EU contribution

€ 954 971,25

Address

**Otakaari 1
02150 Espoo** 

Region

Manner-Suomi > Helsinki-Uusimaa > Helsinki-Uusimaa

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

Partners (1)



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 26 August 2022

Permalink: <https://cordis.europa.eu/project/id/101071159>

European Union, 2024

Supervised morphogenesis in gastruloids

Fact Sheet

Project Information

SUMO

Grant agreement ID: 101071203

DOI

[10.3030/101071203](https://doi.org/10.3030/101071203)

EC signature date

16 September 2022

Start date

1 November 2022

End date

31 October 2027

Funded under

The European Innovation Council (EIC)

Total cost

€ 3 438 217,68

EU contribution

€ 3 337 725,00

Coordinated by

OSLO UNIVERSITETSSYKEHUS

HF

 Norway

Project description

Embryo-like structures with blood vessels

Gastruloids are multi-tissue embryonic organoids (miniaturised and simplified versions of an organ) that can replicate mammalian developmental processes, including early organogenesis, in a petri dish. They hold great promise for scientific advancement through their ability to model organs in their earliest recognisable stages. However, current organoids are small and lack the ability to develop their own vascular networks. Focusing on cardiovascular and foregut development, the EU-funded SUMO project applied cutting-edge technologies, including artificial intelligence and bioengineering to develop reproducible and scalable formation of

gastruloids with embryo-like morphology that demonstrate an advanced stage of organ development.

Fields of science

[natural sciences](#) > [computer and information sciences](#) > **[artificial intelligence](#)**

[natural sciences](#) > [biological sciences](#) > **[developmental biology](#)**

[medical and health sciences](#) > [medical biotechnology](#) > [cells technologies](#) > **[stem cells](#)**

[medical and health sciences](#) > [basic medicine](#) > **[physiology](#)**

Keywords

[gastruloids](#)

[artificial intelligence](#)

[closed loop system](#)

[organotypic modelling](#)

[microfluidic chips](#)

[multimodal imaging](#)

[raman spectroscopic imaging](#)

[microfluidics](#)

[interdisciplinary science](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#)

MAIN PROGRAMME

Topic(s)

[HORIZON-EIC-2021-PATHFINDERCHALLENGES-01-05 - Engineered Living Materials](#)

Call for proposal

[HORIZON-EIC-2021-PATHFINDERCHALLENGES-01](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



OSLO UNIVERSITETSSYKEHUS HF

Net EU contribution

€ 1 194 765,00

Address

Kirkeveien 166 tarnbygget

0450 Oslo

Norway

Region

Norge > Oslo og Viken > Oslo

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Other funding

€ 100 490,00

Participants (4)



THIRD-PARTY



UNIVERSITETET I OSLO

Norway

Net EU contribution

€ 140 078,00

Address

Problemveien 5-7

0313 Oslo

Region

Norge > Oslo og Viken > Oslo

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,96



MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN EV

 Germany

Net EU contribution

€ 935 573,00

Address

Hofgartenstrasse 8
80539 Munchen 

Region

Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,58




FORSCHUNGSVERBUND BERLIN EV

 Germany

Net EU contribution

€ 455 777,00

Address

Rudower chaussee 17
12489 Berlin 

Region

Berlin > Berlin > Berlin

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,95



TEL AVIV UNIVERSITY

 Israel

Net EU contribution

€ 611 532,00

Address

Ramat aviv

69978 Tel aviv 

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,19

Partners (2)



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data



UNIVERSITY OF GLASGOW

 United Kingdom

Net EU contribution

€ 0,00

Address

University avenue
G12 8QQ Glasgow 

Region

Scotland > West Central Scotland > Glasgow City

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

No data

Last update: 30 September 2022

Permalink: <https://cordis.europa.eu/project/id/101071203>

SKIN MICROBIAL DEVICES

Fact Sheet

Project Information

SKINDEV

Grant agreement ID: 101098826

DOI

[10.3030/101098826](https://doi.org/10.3030/101098826) 

EC signature date

21 November 2022

Start date

1 February 2023

End date

31 January 2027

Funded under

The European Innovation Council (EIC)

Total cost

€ 1 718 408,83

EU contribution

€ 1 718 408,00

Coordinated by

UNIVERSIDAD POMPEU FABRA



Spain

Project description

Innovative at-home skin monitoring device

Skin conditions, such as acne or atopic dermatitis, create a high economic and psychological burden on society. They are a result of environmental and hygienic factors, as well as genetics, while diagnosis involves visual inspection, dermoscopic examination and in some cases skin biopsy. Being able to non-invasively monitor skin status would facilitate prompt detection and treatment of dermatological conditions. Funded by the European Innovation Council, the SKINDEV project will introduce technological innovations in a smart skin device that can be used at home to monitor the condition of the skin. The technological innovations will be based on

key aspects of skin microbes and generated knowledge regarding disease pathophysiology.

Fields of science

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electronic engineering](#) > [sensors](#) > **[optical sensors](#)**

[medical and health sciences](#) > [basic medicine](#) > [physiology](#) > **[pathophysiology](#)**

[natural sciences](#) > [biological sciences](#) > **[microbiology](#)**

Keywords

[skin microbiome](#)

[microbial devices](#)

[synthetic biology](#)

[sensors](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#)

MAIN PROGRAMME

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

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



UNIVERSIDAD POMPEU FABRA

Net EU contribution

€ 696 083,00

Address

Placa de la merce, 10-12

08002 Barcelona

 Spain 

Region

Este > Cataluña > Barcelona

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,83

Participants (2)



STICHTING RADBOUD UNIVERSITAIR MEDISCH CENTRUM

 Netherlands

Net EU contribution

€ 910 575,00

Address

Geert grooteplein 10 zuid

6525 GA Nijmegen 

Region

Oost-Nederland > Gelderland > Arnhem/Nijmegen

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



HEINRICH-HEINE-UNIVERSITAET DUESSELDORF

 Germany

Net EU contribution

€ 111 750,00

Address

Universitaetsstrasse 1
40225 Dusseldorf 

Region

Nordrhein-Westfalen > Düsseldorf > Düsseldorf, Kreisfreie Stadt

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

Partners (1)



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 24 May 2023

Permalink: <https://cordis.europa.eu/project/id/101098826>

European Union, 2024

A revolutionary cell programming platform based on the targeted nano-delivery of a transposon gene editing system

Fact Sheet

Project Information

NANO-ENGINE

Grant agreement ID: 101098944

DOI

[10.3030/101098944](https://doi.org/10.3030/101098944) 

EC signature date

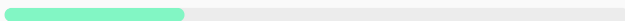
15 March 2023

Start date

1 April 2023

End date

31 March 2026



Funded under

The European Innovation Council (EIC)

Total cost

€ 2 629 885,45

EU contribution

€ 2 629 885,20

Coordinated by

UNIVERSITEIT UTRECHT

 Netherlands

Objective

Aim: The NANO-ENGINE project aims to develop a first-in-class, DNA-based, non-viral, targeted in vivo cell programming technology that can be utilized for treating a broad range of diseases, including cancer and genetic disorders. In this project, the consortium aims to assemble, characterize, and test the Targeted Nanoparticles, explore small-scale synthesis, conduct proof of concept studies and develop a preliminary business plan.

Unmet need: Currently, the accessibility of cell therapies, specifically CAR-T cell therapy, to the general patient population is limited by high costs, complexity, and

safety concerns. These limitations are caused by: 1) ex vivo manufacturing processes of adoptive cell technologies, 2) requirement of highly specialized clinical facilities, and 3) the clinical toxicities and the need for preconditioning chemotherapy. Therefore, there is a large unmet need for alternative approaches that makes adoptive cell therapy truly affordable, scalable, and widely accessible in an out-patient setting.

Solution: We will develop Targeted Nanoparticles that form CAR-T cells in vivo, by combining a proprietary T cell binder-coated long-circulatory lipid nanoparticle and a non-viral, transposon-based, gene editing system. As such, we will circumvent the aforementioned issues associated with traditional cell therapies with reduced cost, complexity, and associated clinical risks, greatly increasing the accessibility of cell therapies to patients worldwide.

Consortium: The consortium will leverage main applicant NANOCELL's deep knowledge on non-viral gene transfer technologies. UU provides critical expertise on nanomedicine, protein and cell engineering. ICL has developed a revolutionary single particle analysis method, which allows the consortium to obtain unique drug product characterization insights. SINTEF adds crucial know-how on bulk analysis of Targeted Nanoparticles, and is closely involved in regulatory standards for nucleic acid therapeutics.

Fields of science

[medical and health sciences](#) > [medical biotechnology](#) > [genetic engineering](#) > **[gene therapy](#)**

[medical and health sciences](#) > [medical biotechnology](#) > **[nanomedicine](#)**

[medical and health sciences](#) > [clinical medicine](#) > **[oncology](#)**

[engineering and technology](#) > [nanotechnology](#) > **[nano-materials](#)**

[medical and health sciences](#) > [medical biotechnology](#) > **[cells technologies](#)**

Keywords

[Cell therapy](#)

[cell biology](#)

[microbiology](#)

[technology commercialization](#)

[nanomedicine](#)

[in vivo gene editing](#)

[lipid nanoparticles](#)

[drug development](#)

[B-cell malignancies](#)

[mass spectrometry](#)

Programme(s)

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

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



UNIVERSITEIT UTRECHT

Net EU contribution

€ 725 238,75

Address

Heidelberglaan 8

3584 CS Utrecht

 **Netherlands** 

Region

West-Nederland > Utrecht > Utrecht

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

Participants (3)



SINTEF AS

 Norway

Net EU contribution

€ 548 966,00

Address

Strindvegen 4
7034 Trondheim 

Region

Norge > Trøndelag > Trøndelag

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,25



NANOCELL THERAPEUTICS BV

 Netherlands

Net EU contribution

€ 1 139 888,75

Address

Padualaan 8
3584 CH Utrecht 

SME 

Yes

Region

West-Nederland > Utrecht > Utrecht

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



KAROLINSKA INSTITUTET

 Sweden

Net EU contribution

€ 215 791,70

Address

Nobels vag 5

17177 Stockholm 

Region

Östra Sverige > Stockholm > Stockholms län

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

Partners (1)



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 29 August 2023

Permalink: <https://cordis.europa.eu/project/id/101098944>

European Union, 2024

Next Generation Molecular Data Storage

Fact Sheet

Project Information

NEO

Grant agreement ID: 101115317

DOI

[10.3030/101115317](https://doi.org/10.3030/101115317) 

EC signature date

2 June 2023

Start date

1 October 2023

End date

30 September 2026

Funded under

The European Innovation Council (EIC)

Total cost

€ 1 938 089,98

EU contribution

€ 1 938 089,98

Coordinated by

UNIVERSITAET PADERBORN



Germany

Objective

Current long-term archival media (such as tape and disk) have several issues, the most important one being that they are short lived (up to 5-10 years) forcing data to be copied between storage media every few years in a costly process which also produces considerable electronic waste.

Longer-lasting media are desperately needed and DNA oligos have been identified as a major contender to be the next archival storage medium. With it, data is written using DNA synthesis and read using DNA sequencing. DNA is particularly promising as a storage medium, due to its durability as it can last for several hundreds of years. However, storing data in DNA oligos is currently too expensive due to the exorbitant cost of DNA synthesis (~0.12USD to write one bit) as well as issues such as speed in

writing (synthesis) and reading (sequencing).

For this reason, we propose to investigate storing data in DNA nanostructures. Our approach is based on producing DNA nanostructures, like a breadboard, and attaching streptavidin at a given set of locations, to either write a one if streptavidin is present or a zero otherwise. The major benefit of our approach is that all possible nanostructures can be built out of a predefined, small set of DNA oligos which can be produced cheaply and en-masse. Writing is therefore substantially cheaper. With our approach, writing, reading (based on atomic force microscopy), and editing are also substantially faster. Editing information is currently infeasible with DNA storage based on oligos.

We have successfully demonstrated the feasibility of both writing and reading in proof-of-concept experiments, giving confidence in the approach. The goal of this proposal is to scale up the basic but successfully tested idea to make this a feasible approach at a larger scale.

The team proposing this work is ideally placed to make the research a success. The team brings all the necessary expertise together.

Fields of science

[natural sciences](#) > [biological sciences](#) > [genetics](#) > [DNA](#)

[natural sciences](#) > [physical sciences](#) > [optics](#) > [microscopy](#)

Keywords

[DNA storage](#)

[archival storage](#)

[DNA origami](#)

[DNA nanostructures](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#)

MAIN PROGRAMME

Topic(s)

[HORIZON-EIC-2022-PATHFINDERCHALLENGES-01-05 - EIC Pathfinder Challenge: DNA-based digital data storage](#)

Call for proposal

[HORIZON-EIC-2022-PATHFINDERCHALLENGES-01](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



UNIVERSITAET PADERBORN

Net EU contribution

€ 707 893,73

Address

Warburger strasse 100

33098 Paderborn

 **Germany** 

Region

Nordrhein-Westfalen > Detmold > Paderborn

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

Participants (2)



KATHOLIEKE UNIVERSITEIT LEUVEN

 **Belgium**

Net EU contribution

€ 600 250,00

Address

Oude markt 13

3000 Leuven 

Region

Vlaams Gewest > Prov. Vlaams-Brabant > Arr. Leuven

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



TECHNISCHE UNIVERSITAET GRAZ

 Austria

Net EU contribution

€ 629 946,25

Address

Rechbauerstrasse 12

8010 Graz 

Region

Südösterreich > Steiermark > Graz

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

Partners (2)



UNIVERSITY OF SURREY

United Kingdom

Net EU contribution

€ 0,00

Address

Stag hill

GU2 7XH Guildford

Region

South East (England) > Surrey, East and West Sussex > West Surrey

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Other funding

No data



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 11 July 2023

Permalink: <https://cordis.europa.eu/project/id/101115317>

European Union, 2024

Enabling advances in diagnosis, patient stratification and treatment for dilated cardiomyopathy patients and families.

Fact Sheet

Project Information

DCM-NEXT

Grant agreement ID: 101115416

DOI

[10.3030/101115416](https://doi.org/10.3030/101115416) 

EC signature date

20 June 2023

Start date

1 October 2023

End date

30 September 2027

Funded under

The European Innovation Council (EIC)

Total cost

€ 4 137 718,75

EU contribution

€ 4 137 668,75

Coordinated by

ACADEMISCH MEDISCH
CENTRUM BIJ DE UNIVERSITEIT
VAN AMSTERDAM

 Netherlands

Project description

A cure for dilated cardiomyopathy

Dilated cardiomyopathy (DCM) is a condition known to cause heart failure and sudden cardiac death. It often affects young adults, with a prevalence of up to 1 in 250 individuals. Currently, medical treatment is limited to managing symptoms, and the only curative option is an invasive heart transplantation at the end-stage of DCM. The EU-funded DCM-NEXT project will address the gaps in understanding DCM's genetic architecture, genes, and genetic variants. This project is supported by world-renowned experts from various fields such as phenotyping, cardio genomics, artificial

intelligence, and others. Their main objectives include identifying and validating targets involved in the pathogenesis of DCM, revolutionising diagnostic testing, enabling precise risk prediction, and developing novel therapies for DCM.

Fields of science

[natural sciences](#) > [computer and information sciences](#) > **[artificial intelligence](#)**

[social sciences](#) > [sociology](#) > [demography](#) > **[mortality](#)**

[medical and health sciences](#) > [clinical medicine](#) > **[cardiology](#)**

[medical and health sciences](#) > [clinical medicine](#) > **[transplantation](#)**

Keywords

[Dilated cardiomyopathy](#)

[Single cell transcriptomics](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#)

MAIN PROGRAMME

Topic(s)

[HORIZON-EIC-2022-PATHFINDERCHALLENGES-01-03 - EIC Pathfinder Challenge: Cardiogenomics](#)

Call for proposal

[HORIZON-EIC-2022-PATHFINDERCHALLENGES-01](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



ACADEMISCH MEDISCH CENTRUM BIJ DE UNIVERSITEIT VAN AMSTERDAM

Net EU contribution

€ 2 032 900,00

Address

Meibergdreef 15

1105AZ Amsterdam

 **Netherlands** 

Region

West-Nederland > Noord-Holland > Groot-Amsterdam

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

Participants (6)



MAX DELBRUECK CENTRUM FUER MOLEKULARE MEDIZIN IN DER HELMHOLTZ-GEMEINSCHAFT (MDC)

 **Germany**

Net EU contribution

€ 576 875,00

Address

Robert rossle strasse 10

13125 Berlin 

Region

Berlin > Berlin > Berlin

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

Other funding

€ 0,00



CENTRO NACIONAL DE INVESTIGACIONES CARDIOVASCULARES CARLOS III (F.S.P.)

 Spain

Net EU contribution

€ 461 000,00

Address

**Calle melchor fernandez almagro 3
28029 Madrid** 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



SERVICIO MADRILENO DE SALUD

 Spain

Net EU contribution

€ 309 611,25

Address

**Paseo de la castellana, 280
28046 Madrid** 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 50,00

 THIRD-PARTY 

FUNDACION PARA LA INVESTIGACION BIOMEDICA DEL HOSPITAL UNIVERSITARIO PUERTA DE HIERRO-MAJADAHONDA

 Spain

Net EU contribution

€ 11 250,00

Address

Joaquin rodrigo 2
28222 Majadahonda 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Research Organisations

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



UNIVERSITEIT MAASTRICHT

 Netherlands

Net EU contribution

€ 421 250,00

Address

Minderbroedersberg 4
6200 MD Maastricht 

Region

Zuid-Nederland > Limburg (NL) > Zuid-Limburg

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



FONDATION CARDIOMETABOLISME NUTRITION

 France

Net EU contribution

€ 324 782,50

Address

Boulevard de l'hopital 47-83

75013 Paris 

Region

Ile-de-France > Ile-de-France > Paris

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00

Partners (1)



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 28 June 2023

Permalink: <https://cordis.europa.eu/project/id/101115416>

European Union, 2024

DNA Microfactory for Autonomous Archiving

Fact Sheet

Project Information

DNAMIC

Grant agreement ID: 101115389

DOI

[10.3030/101115389](https://doi.org/10.3030/101115389) 

EC signature date

21 June 2023

Start date

1 October 2023

End date

30 September 2026

Funded under

The European Innovation Council (EIC)

Total cost

€ 2 437 522,50

EU contribution

€ 2 437 522,50

Coordinated by

UAB GENOMIKA



Lithuania

Objective

We live in a society that produces and requires more and more data every year. It has become apparent that our current data storage strategies are not adequate to meet this increasing demand. The quest for robust, high-density, sustainable, and economically viable data storage solutions has highlighted the enormous potential and suitability of DNA data storage. However, to date, none of the solutions have considered a comprehensive vision of anchoring this technology in standardised archival frameworks that will support long-term storage. Besides, most DNA data storage applications are limited to specialist laboratories due to complex (and expensive) protocols. Our project entitled DNAMIC (DNA Microfactory for Autonomous Archiving) proposes an autonomous solution based around a low energy consumption microfactory that will be developed for end-to-end DNA data

archiving(from encoding to decoding via synthesis, storage, quality control and sequencing among others). The microfactory is interoperable and future proof thanks to technology block that can be easily modified or replaced. Our solution will be compliant with the Open Archival Information System (OAIS) reference model (ISO 14721). To enable the implementation of disaster recovery strategies, critical for long term storage, we propose a novel dual-level encoding scheme. This approach allows the development of self-contained data that include easily changeable metadata, and unalterable data.

Fields of science

[natural sciences](#) > [biological sciences](#) > [genetics](#) > [DNA](#)

Keywords

[DNA data storage](#)

Programme(s)

[HORIZON.3.1 - The European Innovation Council \(EIC\)](#) MAIN PROGRAMME

Topic(s)

[HORIZON-EIC-2022-PATHFINDERCHALLENGES-01-05 - EIC Pathfinder Challenge: DNA-based digital data storage](#)

Call for proposal

[HORIZON-EIC-2022-PATHFINDERCHALLENGES-01](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-EIC - HORIZON EIC Grants](#)

Coordinator



UAB GENOMIKA

Net EU contribution

€ 1 095 200,00

Address

K. Petrausko g. 26

LT-51423 Kaunas

 Lithuania 

SME 

Yes

Region

Lietuva > Vidurio ir vakarų Lietuvos regionas > Kauno apskritis

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00

Participants (4)



KAUNO TECHNOLOGIJOS UNIVERSITETAS

 Lithuania

Net EU contribution

€ 508 125,00

Address

K donelaicio 73

LT-44029 Kaunas 

Region

Lietuva > Vidurio ir vakarų Lietuvos regionas > Kauno apskritis

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



KILOBASER GMBH 

 Austria

Net EU contribution

€ 0,00

Address

Reininghausstrasse 13a

8020 Graz 

SME 

Yes

Region

Südösterreich > Steiermark > Graz

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



TECHNISCHE UNIVERSITAET MUENCHEN

 Germany

Net EU contribution

€ 409 668,75

Address

Arcisstrasse 21
80333 Muenchen 

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](#) 

Other funding

€ 0,00



MABEAL GMBH

 Austria

Net EU contribution

€ 424 528,75

Address

Reininghausstrasse 13a

8020 Graz 

SME 

Yes

Region

Südösterreich > Steiermark > Graz

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00

Partners (3)



HAUTE ECOLE SPECIALISEE DE SUISSE OCCIDENTALE

 Switzerland

Net EU contribution

€ 0,00

Address

Route de moutier 14
2800 Delemont 

Region

Schweiz/Suisse/Svizzera > Espace Mittelland > Jura

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



UNIVERSITE DE GENEVE

 Switzerland

Net EU contribution

€ 0,00

Address

Rue du general dufour 24
1211 Geneve 

Region

Schweiz/Suisse/Svizzera > Région lémanique > Genève

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



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

 United Kingdom

Net EU contribution

€ 0,00

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

No data

Last update: 14 July 2023

Permalink: <https://cordis.europa.eu/project/id/101115389>

European Union, 2024