

HORIZON
2020

General-purpose virus-neutralizing engulfing shells with modular target-specificity

Fact Sheet

Project Information

VIROFIGHT

Grant agreement ID: 899619

[Project website](#) 

DOI

[10.3030/899619](https://doi.org/10.3030/899619) 

Project closed

EC signature date

26 May 2020

Start date

1 June 2020

End date

30 November 2024

Funded under

EXCELLENT SCIENCE - Future and Emerging Technologies (FET)

Total cost

€ 3 880 942,50

EU contribution

€ 3 880 942,50

Coordinated by

TECHNISCHE UNIVERSITÄT
MÜNCHEN



Germany

Project description

Neutralising nanoshells for broad virus targeting

Viral infections affect millions of people every year, yet no treatment is available for 70 % of known pathogenic viruses. The EU-funded VIROFIGHT project is proposing a new radical approach to fight viral infections by constructing synthetic nanoshells that can specifically recognise and engulf entire viruses, neutralising them by occlusion. The interdisciplinary project integrates chemistry, molecular nanoengineering and virology with the mission to develop and test prototypes of

engulfing nanoshells that have the principal capacity to neutralise any given virus. VIROFIGHT has the potential to become a revolutionary achievement as shell prototypes can be developed and produced in the course of weeks after the discovery of a viral pathogen, and the drug concept can be adapted for a wide variety of viruses.

Fields of science (EuroSciVoc)

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

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

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

[medical and health sciences](#) > [basic medicine](#) > [pharmacology and pharmacy](#) > [pharmaceutical drugs](#) > **[antivirals](#)**



Keywords

[DNA nanotechnology](#)

[Protein design](#)

[Aptamers](#)

[Multivalency](#)

[Virus neutralization](#)

[Nanomedicine](#)

Programme(s)

[H2020-EU.1.2. - EXCELLENT SCIENCE - Future and Emerging Technologies \(FET\)](#)

MAIN PROGRAMME

[H2020-EU.1.2.1. - FET Open](#)

Topic(s)

[FETOPEN-01-2018-2019-2020 - FET-Open Challenging Current Thinking](#)

Call for proposal

[H2020-FETOPEN-2018-2020](#)

[See other projects for this call](#)

Sub call

H2020-FETOPEN-2018-2019-2020-01

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



TECHNISCHE UNIVERSITAET MUENCHEN

Net EU contribution

€ 1 630 935,50

Total cost

€ 1 630 935,50

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](#) 

Participants (5)



AARHUS UNIVERSITET

 Denmark

Net EU contribution

€ 648 450,00

Address

NORDRE RINGGADE 1

8000 Aarhus C 

Region

Danmark > Midtjylland > Østjylland

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 648 450,00



KEMIJSKI INSTITUT

 Slovenia

Net EU contribution

€ 630 957,50

Address

HAJDRIHOVA 19

1000 Ljubljana 

Region

Slovenija > Zahodna Slovenija > Osrednjeslovenska

Activity type

Research Organisations

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 630 957,50



UNIVERSITAET REGENSBURG

 Germany

Net EU contribution

€ 686 437,50

Address

UNIVERSITATSSTRASSE 31
93053 Regensburg 

Region

Bayern > Oberpfalz > Regensburg, Kreisfreie Stadt

Activity type

Higher or Secondary Education Establishments

Links

- [Contact the organisation](#) 
- [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

€ 686 437,50



ARTTIC

 France

Net EU contribution

€ 139 162,00

Address

39 RUE DES MATHURINS
75008 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](#) 
- [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

€ 139 162,00



ARTTIC INNOVATION GMBH

 Germany

Net EU contribution

€ 145 000,00

Address

OSKAR-VON-MILLER-RING 29

80333 Munchen 

Region

Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type

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

Links

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Total cost

€ 145 000,00

Last update: 26 February 2025

Permalink: <https://cordis.europa.eu/project/id/899619>

European Union, 2025