

# Partnering Opportunity

Profile status : Published

## Research Development Request

### COVID-19: Spanish biotech is looking for partners to develop novel immunotherapies against COVID19 based on Chimeric Virus Like Particles in Eureka programs, H2020 and similar

#### Summary

*A Spanish SME is looking for a partners who could support the screening and selection of COVID19 antigens to develop prototypes against COVID19. The company has a proven platform technology of chimeric virus like particles that would display selected antigens to elicit strong immune responses in humans. The project has 3 main phases: design of prototypes, screening & production and immunogenic. Companies, research institution or universities experienced in research health are sought (Eureka).*

**Creation Date** 02 July 2020

**Last Update** 04 December 2020

**Expiration Date** 28 February 2021

**Reference** RDES20200605001

**Public Link** <https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/0027165b-4ac6-4deb-a392-2948decf9ceb>

#### Details

#### Description

The COVID19 pandemic has impacted dramatically worldwide and is representing the greatest global health challenge in the short-medium term. This pandemic is being fought on many fronts but there is still a clear need of new immunotherapies and vaccines to reduce infections.

In that situation, each possibility, technology, idea or initiative should be explored. Furthermore, virus like particles exhibit positive characteristics demonstrated to promote immune potentiation, like i.e. The lymphatic transport, effectiveness antigen presentation, safety, etc...

The project is looking for the generation of a novel immunotherapy against COVID19 using chimeric virus like particles and demonstration of its immunogenicity and efficacy through preclinical proof of concept of a prototype. The project will consist in 3 main phases.

1- Design of prototypes. Based on the state of the art, antigenic peptides will be selected to be loaded in the inner or outer surface of the chimeric virus like particle. A library of dozens of prototypes/cell lines would be developed. Sequences will be considering different clonation strategies, antigenic peptides (targeting humoral & cellular responses), combinations and repetitions, production hosts (pichia, mammalian, etc.). A partner with deep knowledge in the immunogenicity of COVID will be desired here.

2- Screening & production. Once the libraries are constructed, transformations/transfection and productions at bench scale will be carried out. Those activities will allow to screen between the different prototypes to finally select a couple of them. The production process would be also established including the operation units, the required in process control and quality analysis. The company have the experience to conduct those experiments through the preclinical space compiling the required information for the chemistry, manufacturing and control (CMC) part of the investigational medicinal product dossier (IMPd) which will facilitate the subsequent clinical phases if the project success.

3- Immunogenicity & efficacy in vitro/in vivo tests. Samples would be produced according to the previous activity to be tested in vitro or in vivo using animal models. The most suitable model would be selected by a partner with the strong expertise and capabilities to carry out these kind of evaluations.

The company is seeking collaboration with universities, R&D institutes and/or companies specialized for developing two parts of the project:

- the immunology of COVID-19: to guide the design with the selection of the most immunogenic epitopes.
- the preclinical proof of concept experiments: to design, conduct and analyse the results with the generated prototypes.

One of the calls identified is Eureka other programmes could be considered as Eurostars or future calls.

Official deadline for the call: Open all the year.

Deadline for expressions of interests: 12 December 2020.

Anticipated duration of the project: 2 years.

## Advantages and innovations

The company have a deep know-how on chimeric virus like particles that act as display platforms for selected epitopes as antiviral preventive future outbreaks.

Particularly important for this disease could be at least the following advantages:

- high efficiency: selecting the most reactive epitopes and compared with epitopes alone.
- do not interfere against detection kits most of them based on genetic material amplification. Able to differentiate vaccinated from really infected people.
- biosafety: considering production and use, that would facilitate and support the clinical phases.
- flexible design. Able to generate different responses (cellular and humoral), combine future strains, etc...
- low cost production.

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## Keywords

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### Technology

06001002	Clinical Research, Trials
06001006	Human vaccines
06001018	Virus, Virology/Antibiotics/Bacteriology

### Market

05007006	Computer-aided diagnosis and therapy
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## Network Contact

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### Issuing Partner

ZACHODNIOPOMORSKI UNIWERSYTET TECHNOLOGICZNY W SZCZECINIE

### Contact Person

ZEBROWSKI Pawel

### Phone number

+48 91 449 43 64

### Email

*pzebrowski@zut.edu.pl*

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**Open for EOI:**     **Yes**

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## Dissemination

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### Relevant sector groups

Healthcare

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME 50-249

**Year Established**

2012

**Already Engaged in Trans-National Cooperation**

Yes

**Languages Spoken**

English  
Spanish

**Client Country**

Spain

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**Partner Sought**

**Type and Role of Partner Sought**

Partner sought are universities, R&D institutes and/or companies specialized in:

- The immunology of COVID19: able to guide the design with the selection of the most immunogenic epitopes.
- The preclinical proof of concept experiments with the generated prototypes: design, conduct and analysis of the results.

**Type and Size of Partner Sought**

SME 11-50, University, R&D Institution, SME <10,>500 MNE, 251-500, SME 51-250, >500

**Type of Partnership Considered**

Research cooperation agreement

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**Program - Call**

**Framework Program**

Eureka

**Call title and identifier**

EUREKA

**Submission and evaluation scheme**

Single-stage submission scheme

**Coordinator required**

No

**Deadline for EOI**

28 Feb 2021

**Deadline of the Call**

29 Jun 2021

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**Attachments**

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