

Partnering Opportunity

Profile status : Published

Research Development Request

ERANET EuronanoMed3 call: Spanish University is looking for companies to develop a targeted delivery system based on an anti-fibrotic nanocluster to reach the pathological heart with potential new theragnostic capabilities

Summary

Spanish University is looking for companies in the Biotechnology sector for the next ERANET EuronanoMed3 call. The general objective of the project is to improve and develop a targeted delivery system based on a metal-nanocluster conjugated to a ligand to reach the pathological heart. A partner is sought that can produce synthetic metal-protein on a large scale.

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Details

Description

A research group from a Spanish University is preparing a proposal for the next ERANET EuronanoMed3 call. The objective of the project is to improve and develop a targeted delivery system based on a metal-nanocluster

Ref: RDES20191208001

conjugated to a ligand to reach the pathological heart. The potential new theragnostic nanoparticle is based on a design modular protein coordinated to a metal that will be used as anti-fibrotic/diagnostic tool to detect in vivo, ex vivo and in vitro relevant fibrotic processes suffered by most cardiovascular patients. Once the heart is reached, it will accumulate in the fibrotic areas as well as reduce the fibrotic process by inhibiting a target protein (Hsp90).

The main objectives related to the project are:

- Development and implementation of a cardiac myofibroblast specific targeted delivery system that is the antifibrotic drug itself to reduce and detect cardiac fibrosis.
- Measure the serum levels of the target protein in patients suffering from cardiac fibrosis and correlate them with relevant clinical parameters.
- Identification and detection of the drug in fibrotic areas of animal models and primary cells derived from patients of myocardial fibrosis. Molecular mechanism understanding.
- Assessment of the drug distribution in contact with human blood samples to understand the traveling in different blood fractions (plasma, cells or extracellular vesicles).

The consortium will group hospitals, Technology Centers, and R&D Institutions. The partner searched is a company that produces a synthetic metal-protein in large scales and/or could conjugate the synthetic metal-protein to a ligand and produce this implement particle in large scale.

Advantages and innovations

The innovative aspects of the project are the advance the state of the art with respect to:

- the treatment of myocardial fibrosis testing preclinical strategies based on target inhibition in big experimental models to confirm the novel preventative strategy demonstrated in rodents.
- The development of strategies to specifically reach myocardial fibroblasts changing the formulation of the anti-fibrotic nanoparticle and scale both theragnostic molecules to obtain commercial dosage of the compound.
- The diagnostic tools (the nanoparticle as biomarker) through the clinical studies of a unique and well-characterized cohort of patients suffering from cardiovascular fibrosis (left ventricle, atrial and aortic fibrosis will be included) to provide a standardized diagnosis for patient stratification and research across Europe.

The workplan spans from cellular and animal models and basic research, improvement of treatment and diagnostic methods, writing the dossier to be presented looking for the acceptance to reach the clinical trials and assessment of innovative, targeted theragnostic strategies.

Technical Specification or Expertise Sought

The partner searched is a company that produces a synthetic metal-protein in large scales and/or could conjugate the synthetic metal-protein to a ligand and produce this implement particle in large scale.

Stage of development

Concept stage

Keywords

Technology

06001002	Clinical Research, Trials
06001012	Medical Research
06001013	Medical Technology / Biomedical Engineering

06004

Micro- and Nanotechnology related to Biological sciences

Market

04010

Microbiology

04017

Micro- and Nanotechnology related to Biological sciences

NACE

P.85.4.2

Tertiary education

Network Contact

Issuing Partner

ZACHODNIOPOMORSKI UNIWERSYTET TECHNOLOGICZNY W SZCZECINIE

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Open for EOI: **Yes**

Dissemination

Restrict dissemination to specific countries

Czechia, Egypt, France, Greece, Latvia, Lithuania, Romania, Taiwan, Turkey

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1972

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The partner searched are SMEs from the countries eligible in the call: Czech Republic, Egypt, Latvia, Lithuania, Romania, Taiwan, Turkey, France, Greece.

Specific area of activity of the partner: Biotechnology

Task to be performed: Partners are sought to produce a synthetic metal-protein in large scales and/or could conjugate the synthetic metal-protein to a ligand and produce this implement particle in large scale. Also, the partner must have experience in international projects such as ERC, FET.

Type and Size of Partner Sought

SME 11-50, SME <10, SME 51-250

Type of Partnership Considered

Research cooperation agreement

Program - Call

Framework Program

Health, demographic change and wellbeing

Call title and identifier

ERANET Euronanomed 3, the 11th Joint Transnational Call

Anticipated Project Budget

It will depend

Coordinator required

No

Acronym

Preclinical study of an implemented potential threragnostic nanocluster to specifically target the heart FibroHeart

Duration

144 days

Deadline for EOI

15 Jan 2020

Deadline of the Call

21 Jan 2020

Weblink to the call

<https://euronanomed.net/joint-calls/11th-joint-call-2020/>

Attachments
