

Partnering Opportunity

Profile Status: Published

Research & Development Request

MSCA-ITN-2020: French R&D Institute is looking for companies, industrial partners to join Consortium and host a PhD student for the internship

Summary

French R&D Institute is the Coordinator of MSCA ITN training network uniting 8 foreign partners. They wish to fully exploit the power of primary producers for biotechnology and to gain insight in metal homeostasis and in the capacity of photosynthetic organisms to withstand pollution. R&D Institute is seeking companies with expertise on metals in algae or in plants. Partner is expected to host a PhD student for internship. All costs of the intership will be covered by H2020 project.

Creation Date	17 October 2019
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Expiration Date	16 November 2019
Reference	RDFR20191017001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/03812edf-6468-4fff-b021-3a419f527e38

Details

Description

In the ITN network they will use an integrative approach reaching from studies on the metal availability in sea and fresh water, monitoring the global cycle of metals in the presence of dissolved organic matter (DOM) over molecular characterization of transporters and enzymes, mainly implied in photosynthesis, to technical developments allowing to bio-absorb desired trace elements and to treat metal-contaminated effluents.

Fundamental research will be performed on metal transporters (Fe and Mn), on the photosystems (Mn, Fe), the electron donor plastocyanin (Cu), the electron acceptor ferredoxin etc. As toxic heavy metal we will include cadmium (Cd) which can outcompete Fe from its catalytic centres. Photosynthetic electron transport and CO₂ fixation will be monitored to follow the effects of metal deprivation and metal toxicity. Beside higher plants, phytoplankton

consisting of cyanobacteria and microalgae will be the object of our study.

Research on metals will be beneficial on one hand for increasing biomass and crop productivity by developing fertilizers, on the other hand for developing new technologies for metal detoxification and for the understanding of the molecular mechanisms in photosynthetic organisms allowing metal uptake, metal storage, metal homeostasis, assembly of cofactors and the catalytic action of certain enzymes.

Aim of the project will be to train a new generation of creative, entrepreneurial and innovative early-stage researchers, able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit in a field of usage of rare earth materials.

The consortium is composed of University Research teams with expertise on photosynthesis, metal uptake and storage, oceanography and of industrial partners experienced in bioreactors and the development of instruments monitoring photosynthesis.

Coordinator is seeking companies situated in the European countries that are experienced in research on fertilizers, phytoremediation, waste water treatment, development of assays to detect heavy metals. The company is expected to host a PhD student for at least 6 months and to participate in a training event. All costs for internship will be covered by the H2020 project. PhD students work on Biology, Physics, Chemistry, Oceanology.

English is the spoken language within the project.

Expression of interest deadline: 15th of November 2019.

Call deadline: 14th of January 2020.

Consortium is planned to be composed by the end of November 2019.

The project will start in autumn 2020.

Advantages and Innovations

- multidisciplinary project (biology/physics/chemistry/oceanography)
- state-of-the-art techniques for metal seciation
- development of optical instruments for photosynthesis
- optimization of microalgae growth, bioreactors

Stage of Development

Project in negotiations - urgent

Keywords

Technology

04005005	Solar/Thermal energy
05001001	Analytical Chemistry
06002001	Biochemistry / Biophysics

06002002 Cellular and Molecular Biology
07003003 Marine Science

Market

03007002 Other measuring devices
06003009 Biomass and Biofuels
07004006 Garden and horticultural products
08004003 Water treatment equipment and waste disposal systems
08004004 Other pollution and recycling related

Network Contact

Issuing Partner

ZACHODNIOPOMORSKI UNIWERSYTET TECHNOLOGICZNY W SZCZECINIE

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Open for EOI : Yes

Dissemination

Restrict Dissemination to Specific Countries

Czechia, Finland, France, Germany, Greece, Israel, UnitedKingdom,

Client

Type and Size of Organisation Behind the Profile

Ref: RDFR20191017001

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

French

Client Country

France

Partner Sought

Type and Role of Partner Sought

The Consortium looks for industrial partners (SME, industry) interested in one of the following activities:

- fertilizers (metal availability or metal content of microalgae/plants)
- waste water treatment
- phytoremediation
- bioreactors for microalgae

Industrial partners are expected to host a PhD student for minimum 6 months for internship and to participate in at least one training action. All expenses will be covered by the European funding of the project.

The industrial partner should be located in EU or eligible H2020 country.

Project targets in priority:

Czech Republic,

Finland,

France,

Germany,

Greece,

Israel,

United Kingdom, but other countries are also welcomed.

Type of Partnership Considered

Research cooperation agreement

Program - Call

Framework Program

Marie Skłodowska-Curie Actions

Call title and identifier

MSCA-ITN-2020

Submission and evaluation scheme

single-stage submission

Anticipated Project Budget

3 000 000 euro

Coordinator Required

No

Deadline for EOI

16 Nov 2019

Deadline of the Call

15 Jan 2020

Project Duration

224 week(s)

Weblink to the Call

<http://ec.europa.eu/research/mariecurieactions/>

Project Title and Acronym

ITN