

## Horizon 2020

### Call: H2020-MSCA-ITN-2018

(Marie Skłodowska-Curie Innovative Training Networks)

### Topic: MSCA-ITN-2018

**Type of action: MSCA-ITN-ETN**  
(European Training Networks)

**Proposal number: 812660**

**Proposal acronym: DohART-NET**

Deadline Id: H2020-MSCA-ITN-2018

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#### How to fill in the forms?

The administrative forms must be filled in for each proposal using the templates available in the submission system. Some data fields in the administrative forms are pre-filled based on the previous steps in the submission wizard.

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Acronym **DohART-NET**

## 1 - General information

Topic MSCA-ITN-2018

Call Identifier H2020-MSCA-ITN-2018

Type of Action MSCA-ITN-ETN

Deadline Id H2020-MSCA-ITN-2018

Acronym DohART-NET

Proposal title Periconceptional Programming of Health Training Network

*Note that for technical reasons, the following characters are not accepted in the Proposal Title and will be removed: < > " &*

Duration in months 48

Panel LIF - Life Sciences (LIF)

Please select up to 5 descriptors (and at least 3) that best characterise the subject of your proposal, in descending order of relevance. Note that descriptors will be used to support REA services in identifying the best qualified evaluators for your proposal.

Descriptor 1 Cell differentiation, physiology and dynamics

Add

Descriptor 2 Epigenetics and gene regulation

Add

Remove

Descriptor 3 Biological systems analysis, modelling and simulation

Add

Remove

Descriptor 4 Developmental biology and technology

Add

Remove

Free keywords

Human ART, embryology, patient cohort, DOHAD, diabetic mother, animal models, stem cell model, epigenetics, proteomics, transcriptomics, metabolomics, bioinformatics, network science

### Abstract

Altered conditions during the periconceptional (PC) period of gamete maturation and early embryonic development have long lasting effects on the health of the progeny, including the childhood, adolescent and adult-life onset of cardiovascular, metabolic and neurological diseases ('Developmental Origins of Health and Disease (DOHAD) concept). Increasing evidence from epidemiological and animal model studies shows that children worldwide exhibit conditions and disease risks associated with the exposures of their parents, including chemical stressors before and during pregnancy, reproductive failure, adverse pregnancy outcome, diabetes, obesity and nutritional compromise. Babies born following human ART ("testtube") interventions render this population (over 5 million world-wide) one of the largest well-defined clinical cohorts to be studied for a better understanding of the future risk of disease for current and succeeding generations in Europe. The DohART-NET project focus on the integration of pre-clinical (animal and stem cell-models) and clinical studies and apply data linkage, bioinformatics and network science for the identification and validation of mechanisms of diseases common in early development. We will exploit our new understanding to promote efficient disease prevention and potential personalised therapeutic interventions in both the general and ART populations to overcome adverse disease pathways. DohART-NET is optimized for training ESRs due to the facts that: i) the topic is progressive and much needed to improve public health over



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*several generations, and it is integrating basic pre-clinical, translational clinical and in silico modeling approaches, iii) the partnership has a highly multi- and interdisciplinary scientific and training expertise and excellence, iv) there is an existing synergy by collaborations and links that the partners wish to strengthen both in science and lasting training programs in a highly inter-sectorial setting.*

Remaining characters

14

Has this proposal (or a very similar one) been submitted to a H2020-MSCA-ITN call?

☒ Yes ☐ No

Please give the proposal reference or contract number.

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