

**CROSS-CUTTING Program 2022**

**Research projects**

**in the field of Mechanisms and mechanics in 3D multicellular systems**

**Letter of intent**

The letter of intent must be uploaded by the candidate to the EVA website (https://eva3-accueil.inserm.fr) before **May 10, 2022 at 12:00AM.**

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# Section I: Civil status

## Leading investigator

|  |  |
| --- | --- |
| Surname |  |
| First name |  |
| Home laboratory |  |
| Laboratory director |  |
| Team leader |  |
| Team name |  |
| Laboratory address |  |
| Town/city |  |

## Partner investigator-1

|  |  |
| --- | --- |
| Surname |  |
| First name |  |
| Home laboratory |  |
| Laboratory director |  |
| Team leader |  |
| Team name |  |
| Laboratory address |  |
| Town/city |  |

## Partner investigator -2 (if applicable)

|  |  |
| --- | --- |
| Surname |  |
| First name |  |
| Home laboratory |  |
| Laboratory director |  |
| Team leader |  |
| Team name |  |
| Laboratory address |  |
| Town/city |  |

**Add another partner if needed**

# Section II: Scientific section

**The objective of the cross-cutting program is to fund the scientific program defined in the text of the call for projects, which will be carried out by a consortium of teams. You are applying to join the consortium.**

This letter of intent must be written **in English** and must include the following sections:

## Application

Please explain:

* Your current research topic (10 lines)
* How it links to the cross-cutting program (max. 10 lines)
* Why you want to participate in the cross-cutting program (max. 10 lines)
* The tools and human resources available in your team for this project (max. half a page)
* The collaboration of mobilized teams (if applicable) (max. half a page)

*Refer to the text of the* *call for projects for information on the program objectives and the different tasks.*

|  |  |
| --- | --- |
| Choice of task **(at least two should be selected)** | |
| ☐ | **TASK 1:** **Development and validation of complex 3D multicellular MODELS** |
| ☐ | **TASK 2:**  **Developing quantitative molecular and cellular-based ASSAYS in 3D cellular models** |
| ☐ | **TASK 3:**  **Data ANALYSIS and theoretical MODELING of 3D cellular assemblies** |

**TASK 1: Development and validation of complex 3D multicellular MODELS**

|  |  |  |
| --- | --- | --- |
|  | Choice of deliverable | |
| 1 | ☐ | Standardized and robust sample preparation |
| 2 | ☐ | Adaptation of the chemical and biomechanical environment of cells: culture medium, scaffold, matrix… |
| 3 | ☐ | Set-up and validation of robust methods for overcoming physico-chemical constraints |
| 4 | ☐ | Other: describe |

**TASK 2: Developing quantitative molecular and cellular-based ASSAYS in 3D cellular models**

|  |  |  |
| --- | --- | --- |
|  | Choice of deliverable | |
| 1 | ☐ | Advanced imaging for 3D structures |
| 2 | ☐ | Optogenetic application in 3D structures |
| 3 | ☐ | Spatial Omics toward single cell resolution |
| 4 | ☐ | Spatio-temporal signaling in 3D structures |
| 5 | ☐ | Other: describe |

**TASK 3: Data ANALYSIS and theoretical MODELING of 3D cellular assemblies**

|  |  |  |
| --- | --- | --- |
|  | Choice of deliverable | |
| 1 | ☐ | Algorithm optimization for traction force microscopy, optical force inference, label-free imaging |
| 2 | ☐ | Multimodal imaging techniques for 3D live imaging with subcellular and, hopefully, molecular resolution |
| 3 | ☐ | Digital twins |
| 4 | ☐ | Analysis of single cell omics or regionalized microdissection-based omics |
| 5 | ☐ | Other: describe |

## Project summary

Given your choice of deliverable, provide a summary: why this deliverable, description of the project, relevance to the consortium (max. 3 pages)

The summary should provide a clear description of the way in which you will respond to the deliverable requirements and the means that will be used by your team to achieve this.

You should explain what your expertise and skills will bring to the program.

# Section III: CV(s) of the investigator(s)

This section should contain the CVs (in English) of the main candidate and the one responsible for the participating partner team(s) (if applicable). Each CV should follow the template below and be no longer than 3 pages including references.

**Name, First name**

**Professional address**

**Current position**

**Education**

**Professional career (in reverse chronological order)**

**Prizes, awards and honors**

**Committee work and professional activities**

**List of 10 selected publications**

(Only publications where you are corresponding/co-corresponding, last/co-last or first/co-first author)

# Section IV: Disqualified experts:

|  |  |  |  |
| --- | --- | --- | --- |
| If the coordinator wishes to do so, note the experts disqualified from evaluation | | | |
| Surname, First name | Country | Email: | Reason |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |