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**Partner search**

**Date (20-10-2020)**

* **(\*) Indicate numbers of relevant topics for Green Deal call:**

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| **LC-GD-8-2-2020: Fostering regulatory science to address chemical and pharmaceutical mixtures: from science to evidence-based policies** |

* **Quick description of the project**

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| **Formal prediction and supervision of regulatory dynamics and reprogramming via discrete concurrent models.** We have developed modelling and analysis techniques for regulatory networks that allow, in a discrete network-based setting, to incorporate information about causation in the prediction of long-term behaviours, aka as attractors or phenotypes in a cell, as well as the analysis of accidental (e.g. chemical) or deliberate (in particular therapeutic and pharmaceutical) perturbations of regulation processes. Particular focus is on *cellular reprogramming,* both concerning the prediction of possible reprogramming pathways, as in deliberate, sequential and observation-based control towards target attractors. We are looking for partners with expertise in: Investigation of pollution impact on cell behaviour; Regulatory tests; Biomonitoring; Drug design |

* **(\*) Do you intend to apply as:**

**Coordinator: No**

**Participant: Yes**

**(\*) Either Description of the expertise requested (up to 1000 characters) - *specify which points of the "expected impact" of the call you are targeting***

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| **We are looking for partners with expertise in*** **Investigation of pollution impact on cell behaviour**
* **Regulatory tests**
* **Biomonitoring**
* **Drug design**

**+ key words :**  |

**Or Description of the expertise proposed (up to 1000 characters) - *specify which points of the "expected impact" of the call you are targeting***

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| **General competences**Modelling and Exploitation of Interaction and Concurrency: from research focused on formal methods and discrete event systems to cellular reprogramming by therapeutic / pharmaceutical intervention

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| **Specific contribution to the call:**  |

**Formal prediction and supervision of regulatory dynamics and reprogramming via discrete concurrent models.** We have developed modelling and analysis techniques for regulatory networks that allow, in a discrete network-based setting, to incorporate information about causation in the prediction of long-term behaviours, aka as attractors or phenotypes in a cell, as well as the analysis of accidental (e.g. chemical) or deliberate (in particular therapeutic and pharmaceutical) perturbations of regulation processes. Particular focus is on cellular reprogramming, both concerning the prediction of possible reprogramming pathways, as in deliberate, sequential and observation-based control towards target attractors. **Targeted impacts:** * Scientific evidence to enable prevention and/or mitigation of co-exposure to pharmaceuticals and industrial chemicals in the environment and the technosphere
* Support the assessment of new regulatory approaches such as, e.g. Mixture Assessment Factors
* Support activities on combined exposures as relevant for the Strategic Approach to Pharmaceuticals in the Environment and as to be defined in the forthcoming Chemical Strategy for Sustainability

**+key words:** modelling, analysis techniques, regulatory networks, network-based setting, cellular reprogramming, reprogramming pathways prediction |

**Organisation information**

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| **Organisation and country:****Inria – Institut national de recherche en informatique et automatique. France**  |
| **Type of organisation:****□ Enterprise □ SME □ Academic x Research institute □ Public Body □ Other: Association** |
| **Former participation in FP European projects?****x Yes □ No** |
| **Web address: www.inria.fr** |
| **Description of the organisation:**Inria is the French national research institute for digital science and technology. World-class research, technological innovation and entrepreneurial risk are its DNA. In 200 project teams, most of which are shared with major research universities, more than 3,500 researchers and engineers explore new paths, often in an interdisciplinary manner and in collaboration with industrial partners to meet ambitious challenges. As a technological institute, Inria supports the diversity of innovation pathways: from open source software publishing to the creation of technological startups (Deeptech).  |

**(\*) Contact details**

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| **Contact person name** | **Stefan Haar (main contact)****Natalia Loëte** |
| **Telephone** | **+33 (0)1 81 87 54 41**  |
| **E-mail** | **Stefan.haar@inria.fr****natalia.loete@inria.fr** |
| **Country** | **France** |

**(\*) –Mandatory**