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## Partner search

Date (01-09-2020)

- **Indicate numbers of relevant topics for Green Deal call:**

**LC-GD-8-1-2020:** Innovative, systemic zero-pollution solutions to protect health, environment and natural resources from persistent and mobile chemicals

- **Quick description of the project**

CEA-Leti offers a unique added-value proposal for innovative solutions (TRL4-6) to improve **new methods and devices for chemical pollution monitoring in the environment or biomonitoring**.

CEA-Leti also contributes to the **toxicological evaluation and health impact assessment** using advanced 3D in vitro-models (organ-on-chip technology).

CEA-Leti creates value and innovation through technology transfer to industrial partners, and can bring along its ecosystem of **SMEs, start-ups and other stakeholders** to enrich the partnership.

- **Do you intend to apply as ? :**

Coordinator: No

Participant: Yes

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

Solution for **better detection technologies**, and **real-time monitoring** approaches

Better understanding of **emerging and persistent pollution on human health**

**Improved hazard and exposure data** for persistent and mobile chemicals

- **On-site environmental analysis or biomonitoring with miniaturized / portable systems**
  - Full analytical chain from sample collection (air, water, soil, and biological matrices), to fast and specific characterization, including sample preparation
  - System integration, electronics, data analysis and communication (autonomous device)
  - Prototyping of devices (usability studies)
- **Key technologies**
  - Highly efficient airborne particle collection (from 10 nm to several  $\mu\text{m}$ ) using an ultra-portable device
  - Organ-on-chip expertise
  - Electromechanical, electrochemical, optical sensors
  - Standardized microfluidics (ISO): from design, chemistry to packaging
  - Non-conventional optical microscopy (Lens Free imaging) for microorganism (microalgae) or cellular characterization
- **Background:** <https://www.panbiora.eu/>, <http://www.leti-cea.com/cea-tech/leti/english/Pages/What's-On/News/arise-project.aspx>, <https://cordis.europa.eu/project/id/825325>

+key words : **environmental monitoring, sample preparation, highly-efficient airborne particle collector, biomonitoring, microfluidics, sensors, organ-on-chip, imaging technologies, miniaturized systems**



### Organisation information

CEA Leti (Grenoble, France)	
<b>Type of organisation:</b> <input type="checkbox"/> Enterprise <input type="checkbox"/> SME <input type="checkbox"/> Academic <input checked="" type="checkbox"/> Research institute <input type="checkbox"/> Public Body <input type="checkbox"/> Other: Association	
<b>Former participation in FP European projects?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Web address:</b> <a href="http://www.leti.fr">www.leti.fr</a>	
<b>Description of the organisation:</b> The <b>Microtechnologies for Biology and Health</b> Division of CEA Leti focuses on the development of innovative tools, methods and systems for applications in the fields of <b>in vitro diagnostic</b> , wearable medical devices, delivery systems, pharmaceuticals, <b>environment monitoring and impact on health</b> . Our core research and development competencies are biology, chemistry, biochemistry, sensing technologies, microfluidics, organ-on-chips imaging technologies, and signal processing algorithms. Our strategy is to serve the industry and answer to the health and environmental challenges, going toward miniaturization, multi-modality and connected devices, delivering prototypes “ready to transfer” to industrial partners.	

### Contact details

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