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**Partner search**

**Date (DD-MM-YY)**

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

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| **LC-GD-8-1-2020** |

* **Quick description of the project**

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| **(describe the objectives, activities, partners requested and their skills)** |

* **(\*) 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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| **Xxxxxxxxx****+ 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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| Plastics and perfluoroalkoxy polymer **(PFA)** are widely used compounds of the world economy, producing 350 to 400 million tonnes of such materials each year. Due to poor recycling morale and extremely persistence, most of them end up in aquatic and terrestrial ecosystems. The situation becomes more terrifying because microparticles and nanoparticles are gradually formed from these materials. Such material is being even more toxic than expected and new methods need to be, monitoring and remove this material from the affected environment. Their danger lies mainly in the binding of chemical pollutants (POP and others) and in reduced food intake. There’s a need to create a suitable biodegradation platform. Microalgae, cyanobacteria, or consortium of both is one of the best choices in “bio-real-time-monitoring” and biodegradation of these materials, as well as for studying their toxicity on pro- and eu-karyotes organisms. Not only CRISPR but also different cultivation methods and knowledge of secondary metabolites can help in these goals. * *Better understanding of emerging and a persistent pollution problem of human and environmental health relevance*
* *Solutions for better (bio)remediation and detection technologies, including real time monitoring approaches*

**+key words: PFA, Plastic waste, micro-nano waste materials, cyanobacteria, microalgae, secondary metabolites, CRISPR, bioremediation, biodegradation, biomonitoring** |

**Organisation information**

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| **Mendel University in Brno, Zemědělská 1/1665, 613 00 Brno, Czech Republic** |
| **Type of organisation:****□ Enterprise □ SME XAcademic □Research institute □ Public Body □ Other: Association** |
| **Former participation in FP European projects?****XYes □ No** |
| **Web address:** [**www.mendelu.cz/en/**](http://www.mendelu.cz/en/)**;** [**https://ucb.af.mendelu.cz**](https://ucb.af.mendelu.cz)**;**  |
| Department of Chemistry and Biochemistry (DCB) is a part of Faculty of AgriSciences of Mendel University in Brno with 100 employees performing their research on the laboratory area of over 750 m2. The department is also a part of Central European Institute of Technology (CEITEC), which has the main goal in creating the high-tech centre of research with excellent instrumentation background. Research and development of advanced materials and approaches in biological chemistry is the main vision of Department of Chemistry and Biochemistry. There are nine laboratories dedicated to key areas such as bioanalytical chemistry, experimental microbial and animal biochemistry and biology, and, last but not least, algae and plant biotechnology and their utilization in agriculture, environment, functional food and plant protection. The instrumental equipment available at DCB enables to the researchers to participate in a large number of grant projects at all levels – internal, national and international. Recent and current ongoing projects awarded by European Commission include:  * 2019-2023: H2020. InteGRated systems for Effective EnvironmEntal Remediation, „GREENER“
* 2018-2022: ERC-2017-STG, “ToMeTuM”
* 2017-2020: H2020-GALILEO-GSA-2017, “GreenPatrol“
* 2017-2018: H2020-WIDESPREAD-04-2017-TeamingPhase1, Back4Future
* 2015-2017: H2020-JTI-IMI2-2014-02-single, “FILODIAG“
* 2009-2013: MAS, Nanoelectronics for mobile AAL-Systems, 7 FP ENIAC
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**(\*) Contact details**

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**(\*) –Mandatory**