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**Partner search**

**Date (26-08-20)**

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

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| **LC-GD-8-1-2020: Innovative, systemic zero-pollution solutions to protect health, environment and natural resources from persistent and mobile chemicals**  **LC-GD-8-2-2020: Fostering regulatory science to address combined exposures to industrial chemicals and pharmaceuticals: from science to evidence-based policies** |

* **Quick description of the project**

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| **Metal-microbe interactions in metal recovery from waste, low-grade ores or water using various biological processes, impact of metal nanoparticles on ecosystems including human environment, understanding of natural metal cycles and their application in the development of innovative biotechnological processes for metal recovery and environmental cleaning-up** |

* **(\*) 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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| **We have expertise in investigation of metal-microbe interactions in various environments. We focus on two main areas: (i) application of various microorganisms in metal recovery from waste and low grade ores in biotechnologies such as bioleaching, biosorption, bioprecipitation and bio-nanoparticle productions and testing nanoparticles for antibacterial, anticancer and immunomodulating activities. And (ii) investigation of the impact of metallic nanoparticles on the environment and ecosystems, mechanisms of nanoparticle mobility and toxicity to ecosystems including human environment, study of the fate and accumulation of nanoparticles in the biosphere. We are interested in developing of innovative biotechnological processes for metal recovery and environmental cleaning up based on natural metal cycles combining several biological process in one consecutive biotechnology as well as understanding of nanoparticle impact on function of natural biogeochemical cycles and human health.**  **+key words : environmental biotechnology, biogeochemical cycles, microorganisms, nanoparticles, toxicity, metal recovery and recycling** |

**Organisation information**

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| **Organisation and country:**  **Pavol Jozef Šafárik University in Kosice, Slovakia, Faculty of Science, Institute of Biology and Ecology** |
| **Type of organisation:**  **□ Enterprise □ SME** 🗹 **Academic □ Research institute □ Public Body □ Other: Association** |
| **Former participation in FP European projects?**  🗹 **Yes □ No** |
| **Web address:**  [**https://www.upjs.sk/en/?prefferedLang=EN**](https://www.upjs.sk/en/?prefferedLang=EN) |
| **Description of the organisation:**  Pavol Jozef Šafárik University in Košice (UPJS) established in 1959, is the second-largest classical Slovak university with five faculties (Medicine, Science, Law, Public Administration, Arts) and approximately 7500 students and 650 teachers/researchers.  The University belongs amongst the three best Research universities in Slovakia .  Research infrastructure of the UPJS in the previous years (2010-2019) has been upgraded by the implementation of 17 projects within the National Operational Program Research and Development (OPRD), which is an implementation strategy of European Cohesion Policy defined in the official National Strategic Reference Framework 2007-2013 and 2014-2020 negotiated with EC. UPJS have participated in FP5, FP6, FP7 and have been participating in H2020 projects as coordinator and partner.    **Institute of Biology and Ecology** is an institution with a complex approach to the solution of broad range of biological and ecological problems of the current science using the newest molecular methods. The Institute is equipped for all techniques required for cultivation microbial analysis, their basic microbial (cultivation boxes, microscopes, including fluorescent and confocal microscopes etc.) as well as non-cultivating, molecular characterisations (MALDI, PCR boxes, PCR cyclers, classic and real-time equipment for DNA isolation, centrifuges, sonicator, bead-beater electrophoresis equipment, documentation systems with a software for 1D and 2D image analysis – TotalLab). The laboratories are certified for work with biological factors and genetically modified organisms of the 1st risk class.  Department of Microbiology covers several scientific topics from the field of clinical, environmental and applied microbiology. The main emphasis in the field of environmental and applied microbiology is on the metal-microbe interactions study on population as well as individual levels. Besides publications in the best ranked scientific journals, department has one granted patent from 2019 and one patent application from early 2020 showing high potential in applied research. |

**(\*) Contact details**

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**(\*) –Mandatory**