**HORIZON 2020**

**PARTNER SEARCH**

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| **Call Information** | |
| **Call title** | EIT-Food-Food4Future - Sustainable Supply Chain from Resources to Consumers |
| **Call identifier** | EIT KICs Call 2016 |
| **Funding scheme** |  |
| **Deadline** | 14 July 2016 17:00:00 |
| **Partner search deadline** | N/A |

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| **Project Information** | |
| **Project title** | The importance of bacterial biofilm in food safety control |
| **Abstract of the project** | Currently, microbial control strategies are not efficient enough to provide a complete eradication of hazardous microorganisms without affecting product qualities. Pathogenic microorganisms can attach to and growth on food surfaces, equipment and processing environments to form biofilm. The formation of biofilm on food and food-contact surfaces can lead to serious hygiene problems and economic losses, inter alia because within a biofilm bacterial cells display higher resistance to adverse environmental effects (increased resistance to antimicrobial products). Therefore, the mechanisms of microbial biofilm formation in the food-processing industry have become a hot topic in the past several years.  The aim of this project proposal is to provide characterization of biofilm formation and visualization of biofilm by Scanning-Electron Microscopy. Our expertise lies mainly in monitoring of bacterial growth, detection of synthesis of extracellular polymer substances such as proteins, polysaccharides and extracellular DNA, which create the biofilm matrix and propose a mechanism for suppression of biofilm formation. Further on, we are able to provide identification of food pathogens by PCR.  We are looking for project consortium aiming at isolation of microorganisms from food processing environment. |
| **Further information** | TRL of our sub parts is 1.  For more, please, see http://af.mendelu.cz/239 |
| **Proposal development stage** | N/A |
| **Requested funding** | App. 400 000 Euro |

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| **Proposer** | |
| **Type of organization** | University |
| **Role in the project** | Partner |
| **Previous FP experience** | MAS, Nanoelectronics for mobile AAL-Systems, 7 RP ENIAC (2009-2012)  Ultra-Fast Molecular Filovirus Diagnostics „FILODIAG, H2020-JTI-IMI2-2014-02-single, H2020 (2015-2016) |

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| **Target Partner(s)** | |
| **Type of organization** | SMEs, Universities, Research Organization |
| **Required skills and expertise** | * Isolation of microorganisms from food processing environment * Biofilm visualization by new electron microscopic techniques such as laser scanning microscopy, magnetic resonance imaging, or scanning transmission X-ray microscopy * Detection of quorum signalling molecules |
| **Role in the project** | * We are looking to be partner |
| **Preferred countries** | N/A |
| **Keywords** | Food safety, biofilm, extracellular polymer substances, SEM, PCR |

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