

Brokerage Event

Food Security | Sustainable Agriculture and Forestry |
Marine, Maritime and Inland Water Research |
Bioeconomy | KET-Biotechnology |

Brussels, 15th November 2017



Sustainable Food Security

BIOASTER microbiota program: from biological sample to industrial application








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BIOASTER



www.ncp-biohorizon.net

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- **BIOASTER** is a **non-profit** technological research institute in **applied microbiology**
- **Dedicated microbiota program:** a fully integrated pipeline accessible to our partners:
 -  **Set-up specific clinical studies:** access to well-defined cohorts (human and animal) and appropriate sample collection: shipping and storage (faecal samples for sequencing and/or cultivation studies, blood samples, urine samples, ...)
 -  **Explore microbiota composition:** high throughput sequencing / transcriptomics & additional technologies
 -  **Explore host-microbiota interactions:** immune response monitoring (identification and validation of new immune biomarkers) / metabolomics and proteomics
 -  **Select, grow and characterize microbial species:** high throughput, proprietary cultivation assays to isolate, cultivate and identify bacterial species of interest (including *Clostridiales* and other anaerobic species) / exploration of bacterial phenotypic traits potentially important for host interactions
 -  **Build and explore preclinical models:** wild-type or genetically modified animal models, axenic and gnotobiotic mice, *in vivo* monitoring and imaging of targeted bacterial strains
 -  **Data analysis:** massive data storage, intensive computing – integrated knowledge management
 -  **Develop specific industrial applications:** industrial standards, ex POC project: identification and selection of new strains of probiotics for animal health improvement – immunostimulant to boost innate immunity

SFS-11-2018-2019: Anti-microbials and animal production

- **Alternatives to anti-microbials:** activities shall focus on developing and **testing new, efficient and targeted alternatives to anti-microbials** in farmed animal production. This could be any type of alternative intervention measure (prophylaxis, prevention or treatment), other than vaccines - such as the **modulation of host immunity and/or of microbial flora, feed additives or novel molecules.**

LC-SFS-03-2018: Microbiome applications for sustainable food systems:

- The **relations between microbiomes from different components across food chains** - from soil to plants, animals, the marine and the human gut - and their impact on food and nutrition security and health shall be considered.

Other topics of interest:

- **DT-SFS-14-2018: Personalized nutrition**
- **SFS-08-2018-2019: Improving animal welfare**

- BIOASTER, **non-profit** technological research institute in applied microbiology
- Created in 2012, located in Lyon and Paris (France), 120 staff, BSL2 & BSL3 labs
- **Mission and scope:** conduct innovative collaborative projects with industrial partners in applied microbiology and infectious diseases (human and animal)
- 47 projects including FP7, Horizon 2020 and ERA-Net projects
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