



Sustainable European food systems using microorganisms – the SIMBA Project

Press release: December 2018

A ground-breaking new project funded by the European Union will explore the potential of exploiting microorganisms in plants and animals to improve food security and promote sustainable food production. The project, SIMBA (Sustainable Innovation of Microbiome Applications in Food System), aims to tackle the growing challenge of supplying food to a growing global population amidst the climate change crisis, through innovative activities around food systems using microorganisms.

The project marks the beginning of a unique plan that will explore the value and potential of microbiomes in our food production systems. Microbiomes are a community of microorganisms such as bacteria, fungi, and viruses that inhabit a particular environment. These communities play a vital role in the productivity and health of plants and animals. Exploitation of the communities in species used as food sources could then lead to the creation of healthier, more stable and secure crops and livestock.

At the recent kick-off meeting in Helsinki in mid-December, **SIMBA** Project Coordinator and Principal Scientist Anne Pihlanto from LUKE, Natural Resources Institute Finland, said: "Recent research has indicated the huge impact microbiomes have on our lives. This makes SIMBA a very exciting project to be involved in. The project will have far-reaching impacts, not only contributing to improved food security, but the development of sustainable diets and novel fermented products are also expected to potentially function as a cure for type 2 diabetes."

SIMBA will focus on two interconnected food chains: crop production and aquaculture. Microbial soil fertility and plant defence will be studied, especially for dry areas susceptible to erosion. The potential of marine microbiomes to boost algal biomass, to facilitate natural feed production and to reduce large use on antibiotics will be studied. Exploration and exploitation of microbiomes are instrumental for the development of new healthier food and feed products. Microbes can also be applied as ingredients to food to improve gut microflora and to ensure a better uptake of nutrients.

As the world population increases and the global climate is changing, the supply of food will become a growing problem. Worldwide, the demand for food and for agricultural produce is predicted to increase by up to 70% by 2050. There is an urgent need to create and develop new food production systems which meet this growing demand for food. **SIMBA**'s innovative approach will add to a growing body of research aimed at stimulating food production not only in Europe, but in global regions where food insecurity has been an ongoing issue. These regions, as well as those which are beginning to feel these negative impacts, are expected to benefit from the project's findings.

More information coming soon on www.simbaproject.eu Follow us on twitter: [@SIMBAproject_EU](https://twitter.com/SIMBAproject_EU)

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Caption: Members of the SIMBA consortium at the project's kick-off meeting in Helsinki in December 2018 (Photo credit: Erkki Oksanen, LUKE)

Notes for the Editor:

The SIMBA project will run from 2018 – 2022 with an overall budget of €10 million. “SIMBA - Sustainable Innovation of Microbiome Applications in Food System is funded by the European Union Horizon 2020 funding programme.

The 23 strong multi-stakeholder, multi-disciplinary SIMBA consortium is well distributed over the European continent and brings together Northern countries (Finland, Norway, Denmark and Iceland), central Europe (Netherlands, Germany, Belgium, Ireland) and south of Europe (Portugal, Spain, Italy). It forms a well-balanced mix between fundamental scientists, applied scientists and enterprises that have a track record in bridging fundamental science to applications in the food industry.

SIMBA is coordinated by LUKE – Natural Resources Institute Finland. AquaTT is the project communication and dissemination partner.

