PRESS RELEASE

HealthFerm

HealthFerm.eu

New EU Research Project HEALTHFERM Just Launched: Plant-based Fermented Foods for Healthier and More Sustainable Diets.

New research is underway: an interdisciplinary consortium of 22 international partners, with the help of community science, targets the societal and industrial transition from traditional to sustainable plant-based fermented foods by design for a healthy everyday diet.

Leuven, 1st September 2022 – Fermented foods are consumed in Europe and across the globe. Especially in the past decades, fermented foods have been hailed for their nutritional and perceived health benefits. Yet little is known about the impact of fermentation on human health or how fermentation can be leveraged to enhance the use of sustainable plant-based raw materials. The new EU research project HealthFerm, a collaboration of 22 partners from across Europe, will shed light on this forward-looking topic. Funded through the European Union's Horizon Europe Framework Programme for Research and Innovation and the Swiss State Secretariat for Education, Research and Innovation (SERI), the project has a budget of EUR 13.1 million (11.3 and 1.8 from EU and SERI, respectively) over the next four years. HealthFerm is coordinated by KU Leuven, Belgium, and the consortium kicks off its activities today.

Fermented foods are 'foods made through desired microbial growth and enzymatic conversions of food components'[1]. Humans have consumed different types of these foods for thousands of years. First, fermentation processes occurred spontaneously rather than intentionally, and the main benefit was the increased shelf-life of foods. In the 19th century, people started to understand the actual fermentation processes better. It was not until the early 20th century that fermented foods gained a reputation for being beneficial to health. At present, they are more popular than ever due to their perceived healthiness.

Interestingly, little concrete evidence exists for their actual health benefits. There are few dedicated studies describing the mechanisms behind any impact of fermented foods on human health, and in-depth knowledge of how fermentation microorganisms and fermented foods interact with the human gut microbiome is missing. Only with the availability of such knowledge will it be possible to design fermented foods with optimal health benefits rather than relying on spontaneous fermentation processes. At the same time, there is a global trend toward a more sustainable food system by reducing the consumption of animal-based foods. Unfortunately, using plant-based ingredients in many food products remains challenging due to, e.g. flavour or processing issues. In Healthferm, new plant-based fermentations will be designed to improve the palatability of plant-based ingredients and leverage their use in a range of foods.

[1] https://www.nature.com/articles/s41575-020-00390-5

Funded by the European Union

These areas are where HealthFerm will leave its mark: The project has been established to understand better the interaction between food fermentation microbiomes, fermented grain-based foods and the human gut microbiome and how they support human health. At the same time, HealthFerm will use these newly gained insights alongside microbial resources and fermentation technology to develop novel, healthy and nutritious foods based on legumes (pea and faba bean) and cereals (wheat and oat), with particular attention to the inclusion of side stream stemming from the processing of these grains. Consumer attitudes towards fermented foods will be studied throughout Europe.

“The research undertaken in HealthFerm will potentially have a wide-reaching impact on not only individual, societal and planetary health, but also the wider EU food industry through greater resource efficiency and increased use of plant-based raw materials,” explains Prof. Christophe Courtin, Professor of Food Biochemistry at KU Leuven and Coordinator of the project.

At the heart of HealthFerm lies a community-science approach for developing innovative plant-based food fermentations. Citizens, artisans and companies will collect food fermentation microbiomes in Europe and worldwide to be analysed to map the biodiversity of microorganisms used to ferment different foods. HealthFerm will build on this knowledge to devise novel foodstuffs that improve the sensorial and health benefits of both traditional foods, like (sourdough) bread, as well as sustainable plant-based dairy and meat alternatives. A specially developed online interface will support this effort.

Prof. Courtin adds: “Of particular interest to us is also how dietary changes including fermented foods can reduce inflammation and the risk for chronic diseases such as obesity, metabolic syndrome and cardiometabolic diseases. This we would like to understand better based on human intervention studies and will do so in comparison to a standard plant-based diet. Alongside, we will also optimise fermentation processes and investigate further the consumer perceptions towards fermented and plant-based foods in Europe.”

The HealthFerm consortium responsible for this innovative endeavour comprises academic, clinical and industrial partner institutions from Belgium, Denmark, Finland, France, Germany, Italy, Romania, Sweden and The Netherlands. Two Swiss partners complete the consortium. The project officially kicks off its activities with the first meeting in Leuven, Belgium, on September 1 and 2, 2022.

***

Funded by
the European Union

HealthFerm

Project Key Facts

Full Name: HealthFerm – Innovative pulse and cereal-based food fermentations for human health and sustainable diets
Start Date: 1st September 2022
Duration: 48 months
Budget: €13 million
Coordinator: KU Leuven, Belgium
Website: www.healthferm.eu

Project Partners

Belgium
- KU Leuven
- Puratos Nv
- Vib Vzw
- Vrije Universiteit Brussel

Denmark
- Chr. Hansen A/S
- Kobenhavns Universitet

Finland
- Healthgrain Forum Ry
- Helsingin Yliopisto
- Ita-Suomen Yliopisto
- Teknologian Tutkimuskeskus Vtt Oy
- Turun Yliopisto
- Valio Oy

France
- Centre de Recherche de l'Institut Paul Bocuse

Germany
- EURICE - European Research and Project Office GmbH

Italy
- Libera Universita Di Bolzano

Romania
- Institutul De Biologie Bucuresti

Sweden
- Sveriges Lantbruksuniversitet
- Chalmers Tekniska Hogskola Ab
- Umea Universitet

Funded by
the European Union

Switzerland

- ETH Zurich
- Planted Foods AG

The Netherlands

- Bridge2Food (Foodcompanions BV)

Contact

Project Coordinator
KU Leuven, Belgium
Name: Prof. Christophe Courtin
Phone: +32 485 168733
Mail: christophe.courtin@kuleuven.be

Project Management
EURICE GmbH
Dr Chiara Lonoce
Phone: +49 30 374415849
Mail: c.lonoce@eurice.eu

Funded by
the European Union