Innovating for tomorrow's food:

Launch of the "Ferments of the Future" Grand Challenge

Press release - 13 December 2022

Fermented foods offer exceptional potential for innovation to support transitions towards safer, healthier and more sustainable food. Piloted by INRAE and ANIA, and financed to the tune of €48.3 million within the framework of France 2030, the "Ferments of the Future" Grand Challenge aims to accelerate research and innovation in the field of ferments and fermented foods. This highly strategic programme, is designed to meet the challenges of the agroecological transition and food sovereignty, and to strengthen the economic leadership of the French and European agrifood industry in a sector that focuses massive international investment. Three months after its official presentation by the Minister of Agriculture and Food Sovereignty, the Minister of Higher Education and Research and the SGPI[1], this ambitious research-innovation programme already brings together some thirty public and private actors, from academic research to cooperatives, start-ups to large companies. The official launch took place on 12 December, with the first meeting of its Strategic Steering Committee.

Cheese, bread, yoghurt, dry sausage, sauerkraut, kefir, wine… These are just a few of many traditional fermented foods commonly found in diets around the world. The goal of the Grand Challenge is to better understand the mechanisms involved in food fermentation in order to shape them, if necessary, to fit better with health requirements and climate change constraints, or to adapt to consumer expectations. "Ferments of the Future" also aims to encourage the development of new fermented foods, based in particular on cereals, pulses, fruits and vegetables. These new products will help shift diets toward plant-based foods, making them more sustainable.

Three months after its official launch, Monday 12 December marks the operational start of the "Ferments of the Future" Grand Challenge, which aims to mobilise natural fermentation techniques to accelerate the agricultural and food revolution for safer, healthier and more sustainable food.

[1] French General Secretariat for Investment

> Safer because fermentation is a natural process that helps preserve food better, thereby limiting the need for additives.
> Healthier since fermentation produces nutrients of interest such as vitamins, improves gut microbiota, and optimises the sensory qualities of food while reducing its sugar and salt content.
> More sustainable because fermentation is a solution for adapting to variations in raw materials due to climate change, or for keeping food waste in check.

Focused on food, "Ferments of the Future" may eventually be applied to other domains, especially in the agricultural field.

A unique innovation platform in Europe

Under the impetus of INRAE and ANIA, some thirty public and private partners have joined forces to overcome the scientific and technological hurdles that slow down innovation in fields related to fermentation. These include no less than 6 higher education institutions and research bodies, including 7 research units specialised in microbiology, food processing and data science; 21 companies, including 8 start-ups, 7 SMEs and mid-sized businesses, and 6 large groups; and 7 associate members (trade unions, inter-professional organisations, technical institutes and competitive clusters). This wide range of actors, brought together in a single decision-making body, a Strategic Steering Committee, will steer the programme and contribute to operations and financial functioning.

The programme will thus rely on the excellence of French research teams in the "Ferments of the Future" fields, both nationally and via regional clusters, and on an innovation platform for more mature projects that will be set up on the Saclay campus from late-2023.

Stepping up the pace to tackle major scientific and technological challenges

The aim is to answer fundamental questions for innovation in the field of ferments and fermented foods. For example: How can ferments adapted to plant-based foods be developed? What technologies are needed to monitor microbial dynamics in fermentation processes in real time? How can the contribution of fermented foods in the maturation of the intestinal microbiota in infants be measured? What does AI have to offer when it comes to developing new combinations of ferments?

These questions, among others, may give rise to research projects within the framework of calls for projects, with an annual budget of €1.5 million, the first of which will be launched in early 2023 in order to select 5 to 7 pre-competitive projects targeting strategic priorities. The first pre-competitive results of the "Ferments of the Future" Grand Challenge are expected by

the end of 2024.

"Fermented foods and beverages are already a major part of our diet. By exploring the tremendous innovative potential of ferments, we will not only develop new foods based on plants, cereals, pulses, milks or fruits, but also make better use of products that are currently considered as waste! This programme therefore aims to make a very concrete contribution to the transition towards healthy, safe and sustainable food for future generations."
Damien Paineau, Executive Director of "Ferments of the Future".

34 public-private partners already involved in the programme

6 public members: INRAE, AgroParisTech, Institut Agro, Université Clermont Auvergne, Université Paris-Saclay, VetAgro Sup

21 private members: Agrial, Atelier du Fruit, Axéréal, Bel, Biogroupe, C&DAC, Danone, Eurogerm, Grandiose, Green Spot Technologies, Greentech, Lallemand, Les Nouveaux Affineurs, Lesaffre, LIP, Nutrition & Santé Nutropy, Revobiom, Philibert Savours, ShakeUpFactory, Toopi; i.e. 8 start-ups, 7 SMEs and mid-sized businesses, and 6 very large companies.

7 associate members: ACTIA, ADEPALE, ANIA, CNIEL, FEDALIM, SYFAB, Vitagora

Contacts

Press office INRAE : presse@inrae.fr

Press office ANIA : blesant@ania.net

About INRAE

Created on January 1, 2020, the French National Research Institute for Agriculture, Food, and Environment (INRAE) is a major player in research and innovation. INRAE carries out targeted research and resulted from the merger of INRA and IRSTEA. It is a community of 12,000 people with 273 research, experimental research, and support units located in 18 regional centres throughout France. Internationally, INRAE is among the top research organisations in the agricultural and food sciences, plant and animal sciences, as well as in ecology and environmental science. It is the world's leading research organisation specialising in agriculture, food and the environment. INRAE's goal is to be a key player in the transitions necessary to address major global challenges.

Faced with a growing world population, climate change, resource scarcity, and declining biodiversity, the Institute has a major role to play in building solutions and supporting the necessary acceleration of agricultural, food and environmental transitions.

About ANIA

ANIA, the National Association of Food Industries, brings together 31 trade unions, 5 associate members and 17 regional associations, representing 16,531 food companies in France. The food industry is the leading economic sector in France with a turnover of 198 billion euros and the largest industrial employer with 436,547 employees. The ANIA is the privileged interlocutor of public authorities, administrations and media on food-related issues.