https://sourdomics.com
sourdomics@gmail.com
sourdomics@sourdomics.com

SOURDOMICS

SOURDOUGH BIOTECHNOLOGY NETWORK TOWARDS NOVEL, HEALTHIER AND SUSTAINABLE FOOD AND BIOPROCESSES

Traditional sourdough bread resorts to spontaneous fermentations leading to natural selections of microorganisms, mainly acid-tolerant yeasts and lactic acid bacteria. Such microorganisms are essentially beneficial to humans and, concomitantly, inhibits propagation of undesirable microbiota. Sourdough fermentation was probably one of the first microbial processes employed by Man for food production and preservation. Sourdough bread stills widely manufactured at farm level across Europe and Worldwide and is highly appreciated by consumers for its distinct flavour, texture and healthy attributes. Through a bottom-up approach, this COST Action SOURDOMICS – *Sourdough biotechnology network towards novel, healthier and sustainable food and bioprocesses* (CA18101), brings together a multidisciplinary group of scientists and SME's/LE's dedicated for many decades to study cereals and sourdough technologies.

The main purpose of SOURDOMICS is to exploit sourdough biotechnology through the entire value chain: from sustainable production of cereals and pseudocereals, through the exploitation of fermentation processes, to the valorisation of by-products in a circular economy approach (Scheme 1). At the upstream, it aims at exploitation autochthonous cereals and pseudocereals with good baking, nutritional and healthy attributes, while promoting a sustainable agriculture and preserving genetic diversity. Simultaneously, aims at contributing to develop new business opportunities to local farmers through their engagement into food processing with shared small-scale breadmaking facilities, and the integration into industrial and trade chains. Such features are in agreement with European Agenda for Food and Environment. At the downstream, the exploitation of sourdough fermentation as a biotechnological tool comprises several objectives: Design microbial starter-cultures with a wide range of biotechnological applications; Production of healthy and tasty varieties of bread, thus catalysing changes in consumers' diets and market orientations; Production of high-added value metabolites resorting to sourdough microbiota; and Valorisation of by-products from cereal production and sourdough technologies. Indeed, the great intent of SOURDOMICS is to bring together Scientific and Technological information from decades of research in sourdough science, since the late 1970's, while going much beyond – in a way to guarantee the future of sourdough biotechnology, to respond to new Global Societal Challenges, and to put these and novel bioadvances at service of our Society by providing and implementing effectively a varied and large number of novel industrial, agricultural and commercial applications.

SCHEME 1. SOURDOMICS: schematic representation of the concept, impacts, contributions and applications