

The MicroEmiRo project aims to improve the quality and safety of food productions in the Emilia-Romagna Region through the exploitation of selected microbial cultures.

### **LEADER**



ALMA MATER STUDIORUM Università di Bologna Centro interdipartimentale di ricerca industriale agroalimentare

CIRI AGRO
Scientific Coordinator:

Prof. Fausto Gardini

#### **PARTNERS**



SITEIA PARMA Scientific supervisor: Prof. Erasmo Neviani



BIOGEST-SITEIA

Scientific supervisor:

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Scientific supervisor:

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### **PARTICIPATING COMPANIES**



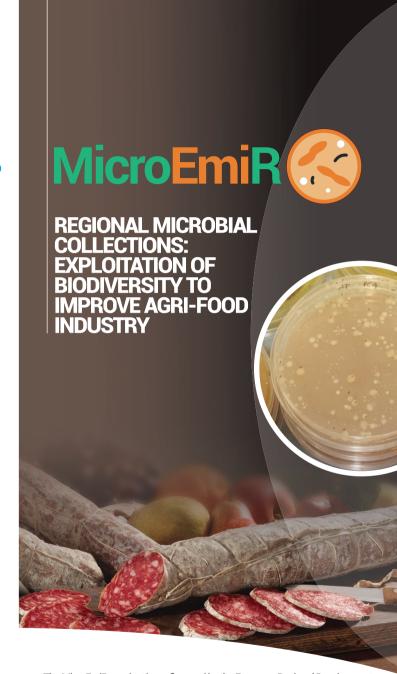








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**EXPLOITATION OF BIODIVERSITY** TO IMPROVE AGRI-FOOD INDUSTRY

## STATE OF THE ART

The use of microorganisms to preserve food dates back to ancient times, even if fermentation processes were performed under empiric and domestic conditions. In the last decades, the continuous study of complex microbial consortia responsible for the wide variety of fermented products allowed the isolation of thousands of bacterial and fungal strains.

important economic and cultural role at regional, national and international level. This precious heritage of microbial biodiversity can be used to produce new foods or to increase the quality and safety of existing fermented foods.

### THE PROJECT

The MicroEmiRo project exploits the technological potential and biodiversity of microbial resources located in four laboratories (CIRI Agroalimentare as coordinator, SITEIA.PARMA, BIOGEST-SITEIA, BioDNA) belonging to the High Technology Network of the Emilia-Romagna Region. The partnership also includes five companies (EuroCompany, Clai, Macè, Caseificio Mambelli, Chr Hansen) specialized in different food productions.

## **AIM**

- 1) development of new nut-based fermented products for vegan consumers endowed with good sensorial properties;
- 2) production of short ripened cheese with low salt, lactose content and calorie intake using starter cultures characterized by specific abilities (aroma profile, exopolysaccharides and bacteriocin production);
- 3) optimization of autochthonous starter cultures to increase sensorial features, safety and recognizability of traditional fermented sausages;
- 4) use of bacteriocin-producing lactic acid bacteria to increase shelf-life and safety of fresh products (ready to eat fruit salads and fresh sausages).

