



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

---

## **FOOD PROCESSING, PRESERVATION AND PACKAGING**

*Optimization and innovation strategies toward sustainable production technologies and packaging solutions for both plant based (fruit, vegetables, cereals, etc.) and animal origin foods, wine and beverages.*



Technological innovation is essential to improve food quality and safety, reducing energy demand and increasing process sustainability and product functionality. Research at University of Bologna covers a wide range of issues:

- Non destructive analysis and determinations of quality parameters during processing and storage (sensors, e-nose, Image analysis, etc.) to promote on-line data collection and digital processing
- Impact of different processing and storage technologies (frying, drying, baking, cooking, chilling, freezing, etc.) on plant and animal products
- Optimization of advanced analytical techniques to better guarantee food quality, authenticity and food origins
- Study of pretreatment and the processing conditions to minimize the formation of toxicants in food
- Advanced mathematical and statistical analyses in food engineering for product and process optimization
- Set up and optimization of fermentation processes in order to obtain traditional or innovative products with particular nutritional, functional and organoleptic characteristics
- Factors affecting microbial metabolism and selection of strains to be employed to improve the quality of fermented foods (meat, dairy, bakery, etc.)
- Advanced technologies to obtain active and eco-friendly packaging

## HIGHLIGHTS

H2020 projects: [InnoVar](#) - Next generation variety testing for improved cropping on European farmland; [NextGenProteins](#) - Bioconversion of underutilized resources into next generation proteins for food and feed; [UNTWIST](#) - Uncover and promote tolerance to temperature and water stress in *Camelina sativa*; [OLEUM](#) - Advanced solutions for assuring authenticity and quality of olive oil); [EcoPROLIVE](#) - Ecofriendly processing system for the full exploitation of the olive health potential in products of added value;

ERANET: [ECOBERRIES](#): Innovative and eco-sustainable processing and packaging for safe and high quality organic berry products with enhanced nutritional value; Infrastructures: [CIRI Agrifood](#) has the aim of reinforcing the relation between industry and research centers, promoting the technological transfer in order to meet the needs of the productive sector; it is equipped with innovative pilot plants for food processing and packaging.