



UNIUNEA EUROPEANĂ



Instrumente Structurale  
2014-2020

# METRO FOOD • RO



Proiect cofinanțat din Fondul European de Dezvoltare Regională prin Programul Operațional Competitivitate 2014-2020



# METROFOOD-RO, SCIENTIFIC RESEARCH AGENDA, 2023-2027

Scientific Agenda developed by the European METROFOOD-RI consortium

Recommendations of EAT, BBI (Bio-Based Industries)

The strategies of SCAR, FoodForce, Safe Consortium, FACCE JPI, HDHL, EIT Food

The results of the European project Fit4Food2030

European initiatives: European Green Deal, Farm to Fork Strategy

MCID Strategy 2021-2027-National Research Plan

National Smart Specialization Strategy for transfer of knowledge to the industry

Consulted documents:

METROFOOD-RO SCIENTIFIC RESEARCH AGENDA, 2023-2027

[www.metrofood.ro](http://www.metrofood.ro)

METRO

# MAIN R&I DIRECTIONS

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## SAFE AND SUSTAINABLE FOODS FOR A HEALTHY DIET

Ecological agriculture/Functional foods/Food safety/Food contaminants/Food authenticity/Testing packaging materials

## NUTRITION

Precision nutrition/Healthy ageing

## FOOD BIOTECHNOLOGIES

## FOOD METROLOGY

## FOOD OMICS

## CONSUMER SCIENCE

## CIRCULAR ECONOMY IN THE AGRI-FOOD CHAIN

Food waste

## ONE HEALTH

## ECOLOGICAL AGRICULTURE

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### Topics of interest:

- Development of new technologies for **processing** ecological products, ecological packaging
- Optimizing the **cultivation technologies** of organic products, developing innovative solutions for the establishment, maintenance and harvesting of organic products
- Optimization of **natural resource management**
- **Biodiversity** and conservation of natural habitats
- Sustainable **production systems**
- **Efficient pest and disease management**
- **Quality and safety of products**



## SAFE AND SUSTAINABLE FOODS FOR A HEALTHY DIET

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### Topics of interest:

- Innovative methods for preventing and combating **food fraud**
- Development of tools to **validate** the quality of food products (e.g. organic *versus* conventional product).
- **Vegetable proteins** *versus* animal proteins
- **Food safety**
- Food contaminants
- Food authenticity
- **Healthy ageing**
- **National program** to encourage entrepreneurs who collect local products from biological agriculture and offer them to the population.
- Increasing the number of **innovative SMEs** through adapted programs



# PRECISION NUTRITION

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## Topics of interest:

- Development of smart products, tools and technologies for use in **personalized nutrition**.
- The influence of diet on health and food intolerances (celiac disease and phenylketonuria)
- **New food matrices** enriched in bioactive compounds and improved sensory attributes for different categories of consumers
- **Functional foods**
- **Healthy ageing**

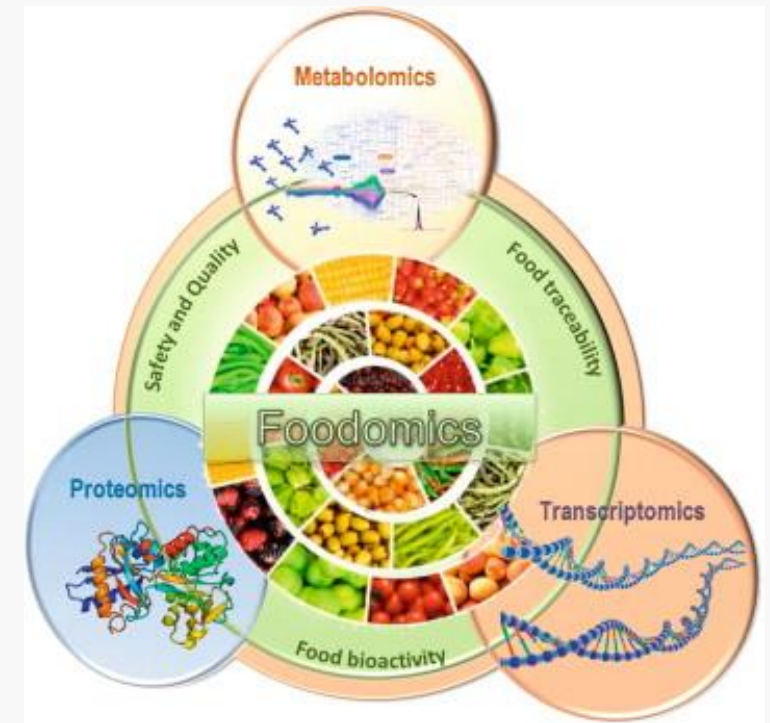


# FOOD OMICS

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## Topics of interest:

- Application of "**foodomics**" in the fields of food safety, quality control, authenticity, design of food processes, biotechnology and nutrition
- Alternative protein sources
- Application of modern techniques of **genomics**, **metagenomics**, **transcriptomics**, **proteomics**, **metabolomics** to identify pathogenic microorganisms and toxins in food



FoodOmics enables the connectivity between food, diet, health, disease and the individual

# THE CIRCULAR ECONOMY IN THE AGRI-FOOD CHAIN

## Topics of interest:

- **Reducing emissions** from agriculture
- Development of adaptive methods of **water and soil management**
- Development of new **sustainable food manufacturing processes to reduce water/energy input**
- **Reduction of food waste**
- **Valorization of biologically active compounds from by-products-**  
New functional food ingredients
- **Blue bioeconomy**
- Monitoring the quality of food products throughout the supply chain (sensors)
- Collaboration within: European Cluster Collaboration Platform, European Partnership for a circular bio-based Europe
- Involvement of innovative SMEs
- Creation of a system of relations - that facilitates the interconnection between agro-food research and institutions and companies in the field.



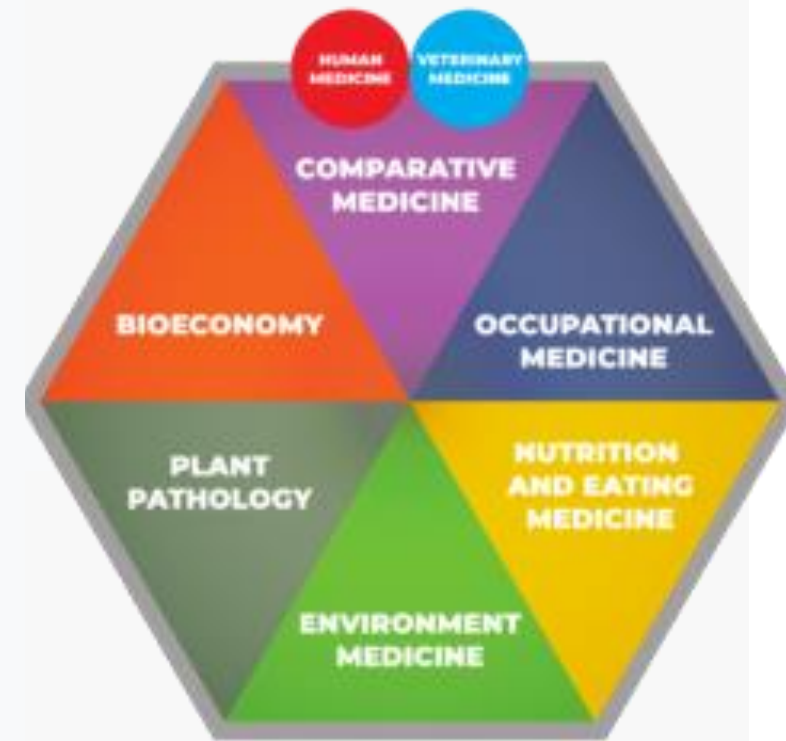


# ONE HEALTH

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## Topics of interest:

- Development of tools and technologies to identify and quantify **harmful factors** of any nature
- Organization of compatible **standardized structures for diagnosis, prevention and treatment in pandemics**
- **Supporting entrepreneurship** that offer services and goods with applications in the One Health field
- **Special national program for the establishment and promotion of innovative SMEs**
- **Educating** the population and especially the young generation in the spirit of respect for the environment, animals, and fellow humans
- **Creating partnerships** between academia and multinationals for the production of biopreparations designed in Romania
- The **involvement of multinationals in medical-veterinary research**
- The establishment of at least one **One Health National Research Laboratory**



Plant-Animal-Human-  
Environment interfaces

# FOOD BIOTECHNOLOGIES

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## Topics of interest:

- **Clean technologies**/Technologies with low energy consumption
- The influence of technology on the **bioavailability of nutrients**
- **Reducing the level of additives in food**
- **Fermentative** processes
- Exploring the potential of **lactic acid bacteria** to produce exopolysaccharides, diacetyl and alanine
- Promotion of modern **biotechnologies in order to capitalize on resources**, to processing from the various profiles of the field, microorganism cultures, enzymes, biomass, fermentations, ripening
- Technologies specific to different profiles of primary and industrial processing.



# CONSUMER SCIENCES

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## Topics of interest:

- Understanding the **attitude of consumers regarding the choice of food**
- **Labelling** of nutrition and health claims
- **Modern methodologies** for food sensory analysis and consumer behavior evaluation
- Studies on the sensory evaluation of foods for **diets intended for children and elderly consumers**
- Diversity of the senses: **multidisciplinary studies on the interaction between the taste, texture and aroma of food.**
- **Sensory approaches** regarding the reduction of sugar, salt and lipid content in food
- The importance of sensory qualities in the choice of **traditional assortments** of food products
- **Correlations** between consumer preferences and sensory characteristics of different types of food
- Research on the degree and type of changes in the physiological capacities of sensory perception with ageing.



# FOOD METROLOGY

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## Topics of interest:

- Defining and achieving **internationally accepted measurement units** and (metrologically) tracking by assessing uncertainty in relation to national and international reference standard measurements
- The need for **new reference materials**
- Equipment **calibration**
- **Data quality and integrity**



# Thank you!



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