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BIOTECHNOLOGY FOR FOOD: A POTENTIAL TOWARDS A RESILIENT AND SUSTAINABLE FOOD SYSTEM IN EUROPE



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AGORADA+ 2024
EURADA event



Walloon food innovation



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Biotechnology for food: a potential towards a resilient and sustainable food system in Europe

Betty MILANO

- Wagralim
- I4CE
- Biotech4Food
- FoodWal



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THE AGRI-FOOD
INNOVATION
CLUSTER

Wallonia - Belgium



support economic activity



employment in strategic areas for Wallonia



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Wallonia.be
EXPORT
INVESTMENT



**NEXT
GEN
EU**

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Wagralim



**300 members
= dynamic
ecosystem
around
innovation**



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OUR CORE BUSINESS



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OUR STRATEGIC BUSINESS AREAS

Wagralim



Interconnected, sustainable agrifood systems

Creating an agro-industrial plant protein chain that meets **sustainability** criteria



Efficient and transparent industry

Innovations for greater food safety and transparency
New solutions to reduce the impact of **packaging**



Nutrition & consumer

Innovation project to develop a consumer offering that provides a better **nutritional** balance while integrating the principles of sustainability.



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IMPACT

- 77 projects approved by the Walloon Government
- 252 products, services or processus developed
- 14 EU projects funded
- 4 TSSP Agri-food partnerships

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S3

- S3 = smart specialization strategy – FOOD priority sector
- Wagralim's alignment (EU & regional) → regional initiatives
 - Ex. FoodWal

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An **inter-regional partnership** promoting quadruple helix approach specialised in the agri-food sector, and more particularly in the production of **innovative circular ingredients** (nutritional, functional) intended for **food** processing industry and **non-food** applications, including feed, cosmetics, pharma, etc.

Food, feed, cosmetics

Ingredients for a circular economy

“

We support the development of innovative ingredients for cross sectoral applications, while fostering circularity.

”



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I4CE aims to...

- ✓ Boost the economy
- ✓ Develop sustainable innovation & growth
- ✓ Catalyse & animate the ecosystem
- ✓ Promote cross-regional cooperation

And explore new routes...

- ✓ To new ingredients
- ✓ With new raw material
- ✓ With new technologies
- ✓ To new applications and uses
- ✓ To better meet consumer needs

Ingredients for a circular economy



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Bio-based products & crops

- Agricultural products
- Aquatic biomass
- Medicinal herbs

Side streams

- Agrifood co- and by-products
- Food processing side streams
- Compounds from aquatic organisms

Nutritional ingredients

Proteins from different sources, lipids, fibers, etc.

Techno-functional ingredients & additives

Antioxidants, peptides, hydrocolloids, etc

Turning agri-food biomass into ingredients

Green approaches

Extraction
Separation & purification

Fermentation

Liquid
Solid state
Precision

Stabilization

Vacuum drying
Freeze drying
Atomization
Spraying

Analysis

HPLC
MS spectrometry
Rheology
Enzyme assays

Conditioning & conservation

Microencapsulation
Coatings
High pressure

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Acceleration of new promising circular agri-food value chains and sustainable industrial interregional investments in SMEs, by integration of advanced biotechnology

Biotech4Food

Greener and resilient Europe

Clusters, RTOs, regional authority,

15 companies



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Food innovation and biotech ?

- The agri-food sector is the first industrial sector in Wallonia in terms of turnover and employment, mainly composed by SMEs
- Fermentation and precision fermentation = most used processing technology = opportunities

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- Identify new value chains

- Alternative proteins from bacteria- or mycelium sources
- Probiotics
- Microalgae based products (protein/fats)

Biotech4Food

- Support innovation in food sector through biotechnologies

- Precision fermentation and fermentation, valorisation of side streams, enhancement of processes for food complements (probiotique), processing insectes for feed, dairy sector

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Biotech on EU level



Simplified regulatory framework and faster access to market

- Launch a study analysing how biotech legislation could be further streamlined. This study could lay the foundations for a possible EU Biotech Act.



Better support for scale-up and ease of navigating regulations

- Establish an EU Biotech Hub to help companies navigate through the regulatory framework and identify support to scale up, by end 2024.



Foster a larger market for biotechnology and biomanufacturing

- Deepen cooperation with international partners, such as the US, on biotechnology research, under the Science and Technology Agreements, by end 2024.

Enable fair comparison with fossil-based products

develop methodologies to ensure a fair comparison between fossil-based and bio-based products, in 2025, including the review of the Environmental Footprint.



Encourage more investments

- Launch a study to identify barriers and ways to support the consolidation of investment funding, by mid-2025.
- Advocate for the inclusion of biotech and biomanufacturing as part of the European Innovation Council accelerator Work Programme 2025.



Accelerate the uptake of AI in biotechnology together with stakeholders

- Support structured exchanges with businesses and industry in biotech and biomanufacturing in the context of the GenAI4EU initiative.
- Raise awareness of facilitated access to the EuroHPC supercomputers for AI startups and the science and innovation community.
- Support the development of advanced generative AI models for healthcare, leveraging data, existing tools and using EuroHPC supercomputing capacities.

Review the EU Bioeconomy Strategy by end 2025

Take into account the current societal, economic and environmental challenges, including the bioeconomy's industrial structure and its links to biotechnology and biomanufacturing to contribute to a stronger EU economy.

Biotechnology¹ and its application to manufacturing bio-based products, **biomanufacturing²** can be part of the solution to address many societal and environmental challenges, such as climate mitigation and adaptation, access to and sustainable use of natural resources, restoration of vital nature systems, food supply and security, and human health. Biotechnology and biomanufacturing are key for the competitiveness and the modernisation of our economy due to their high growth potential and increased labour productivity. They also strongly enhance the EU's open strategic autonomy and resilience by reducing industry's dependency on fossil-based input and other sources of raw materials, to advance the European Health Union and achieve the EU's climate goals.

Biotechnology has also been identified as a critical enabling technology from a strategic perspective³, given its cross-cutting nature. It is also one of the Strategic Technologies for Europe Platform (STEP) relevant for the EU's industrial strategy.

BOOSTING
BIOTECHNOLOGY AND
BIOMANUFACTURING
IN THE EU

This Communication aims to unlock the full benefits of biotechnologies and biomanufacturing, which are crucial for the competitiveness and modernisation of EU industry and offer high growth and productivity potential. Here is how.

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Strategic positioning

- Wagrallim is dealing with the **opportunities** of biotech
- Positioning on EU level as cluster through **topics**
- Positioning on EU level for our companies
 - through the S3 partnership = strong consortium for calls
 - through EU projects

THANK YOU!

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www.wagralim.be



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