



Consorzio  
Italbiotec

# Industrial perspective for blue biotechnologies in Italy

Ecomondo – 10 November 2022

# Consorzio Italbiotec

Italbiotec shapes a **cutting-edge innovation ecosystem** of start-ups, companies, universities on biotechnology where cooperation and knowledge exchange trigger growth and sustainable innovation

**1998**

Foundation

by the joint initiative of **Biosearch Italia SpA** and the Universities of **Bologna** and **Palermo** for the innovation management of R&D projects in the pharmaceutical sector

**2004**

Growing community

progressively increased the number of **shareholders** up to the current **70 public and private entities**

**2010**

Horizons

has further expanded its areas of specialization from **Pharma** to **Bioeconomy** and **Agro-food**

**2021**

leading in biotech

bringing together **31 Italian universities** and research institutions, the **National Research Council**, and over **55 companies and star-ups**.

# Our community

21 universities & research institutions

10 foundations & associations



57 Private companies

Bioeconomy

Agri-food

Life Science

# Our projects



4F  
Fine Feed For Fish



ArtIDe  
Development of an assay for the early diagnosis of chronic seronegative inflammatory arthritis



Ready  
Network REgionAle for the development of diagnostic methods in rapid response to emerging epidemics and bio-emergencies



ADViSE  
Antitumor Drugs and Vaccines from the SEa



Marpipe  
Improving the flow in the pipeline of the next generation of marine biodecovery scientists



Hydrogex  
A Peptide Hydrogel Platform for Extracellular Vesicles Isolated and Multimodal Analysis

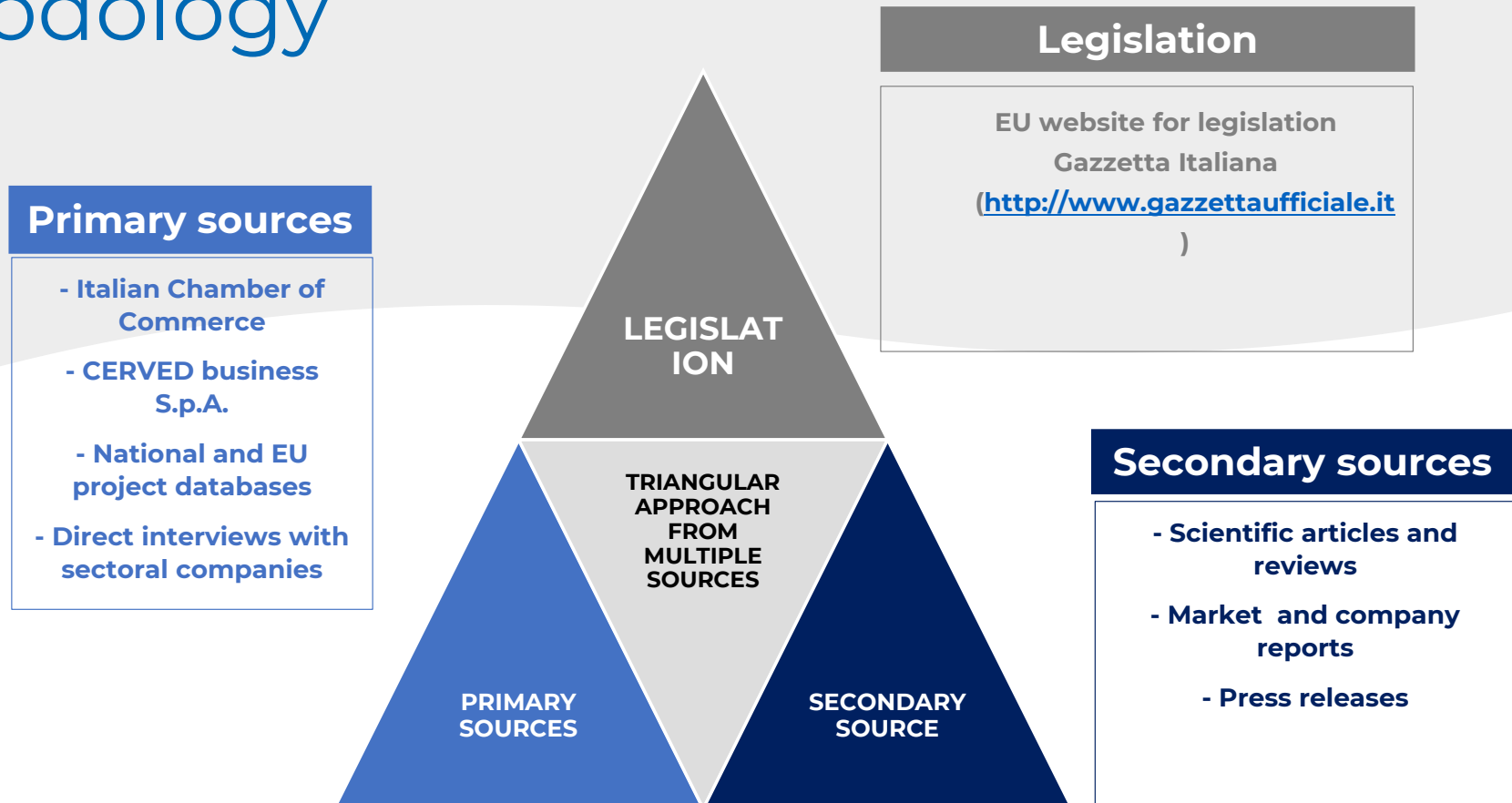


Iridis  
Therapeutic devices' development for diabetes related pathologies' treatment

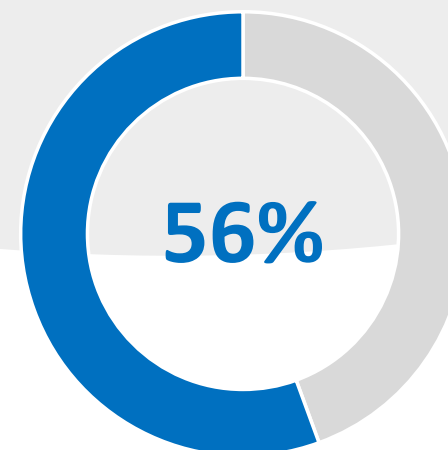
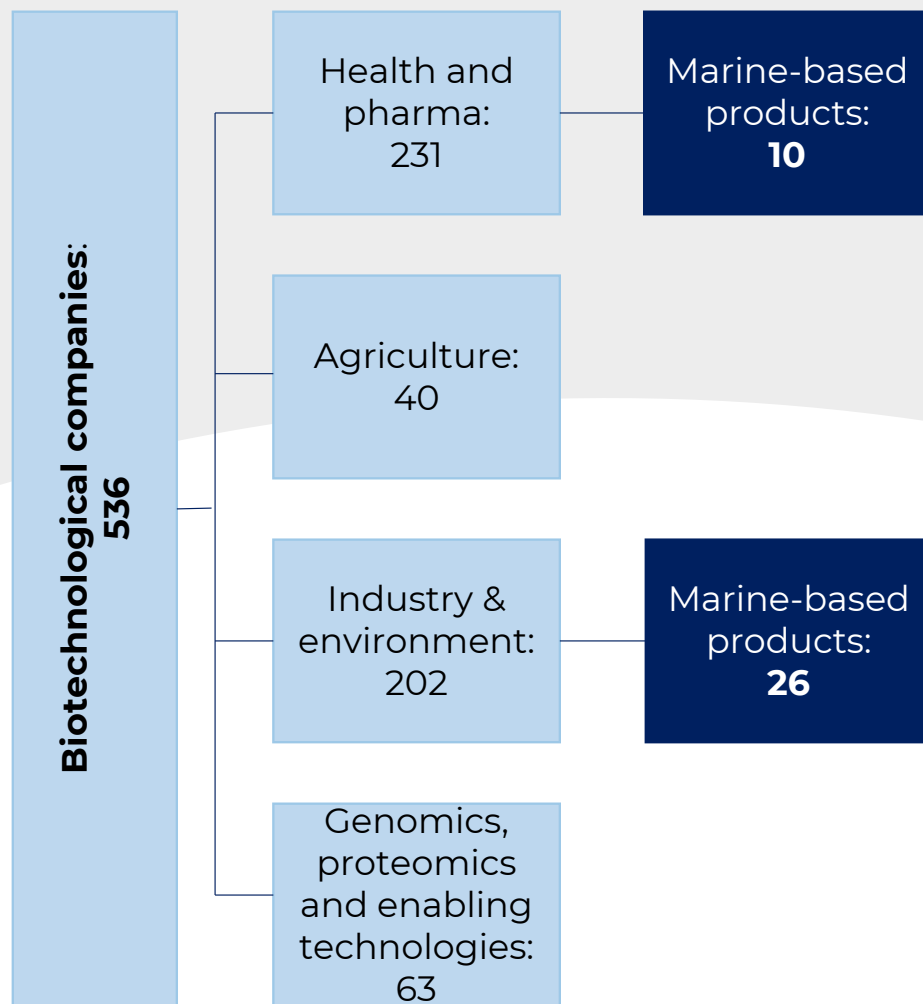


ITEM  
Technological Innovation for the Safeguard and the Innovation of Marine Ecosystems

# The blue biotech Italian industry – mapping methodology



# The blue biotech Italian industry – results



■ Altro ■ Microalge

- 20 companies in the food sector, **64% using *Spirulina*** as biomass

# The blue biotech Italian industry – food



€ 51.957.467

- > CAGR 15%
- > 99% made of companies in the microalgae sector

Turnover 2019

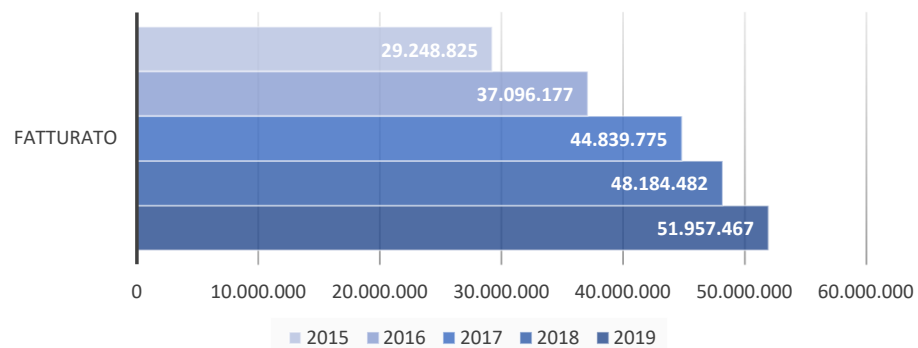


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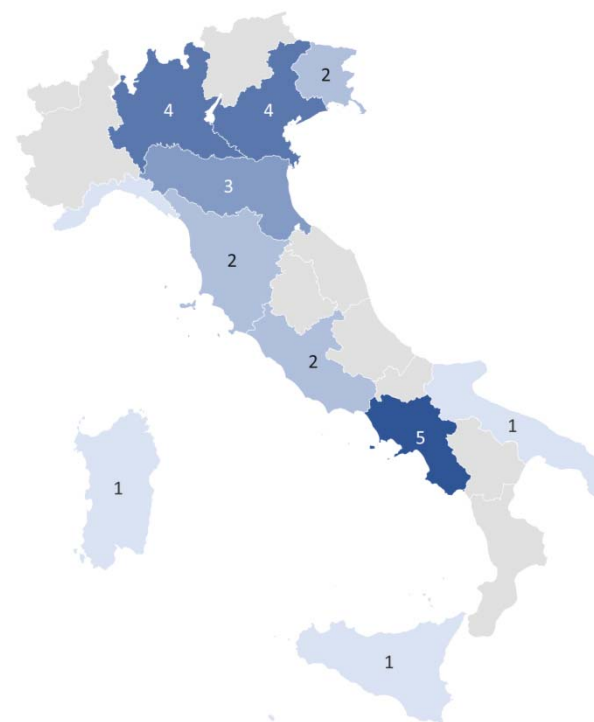
- > 20 very small enterprises
- > 67% made of companies in the microalgae sector

Employees

Turnover trend 2015-2019



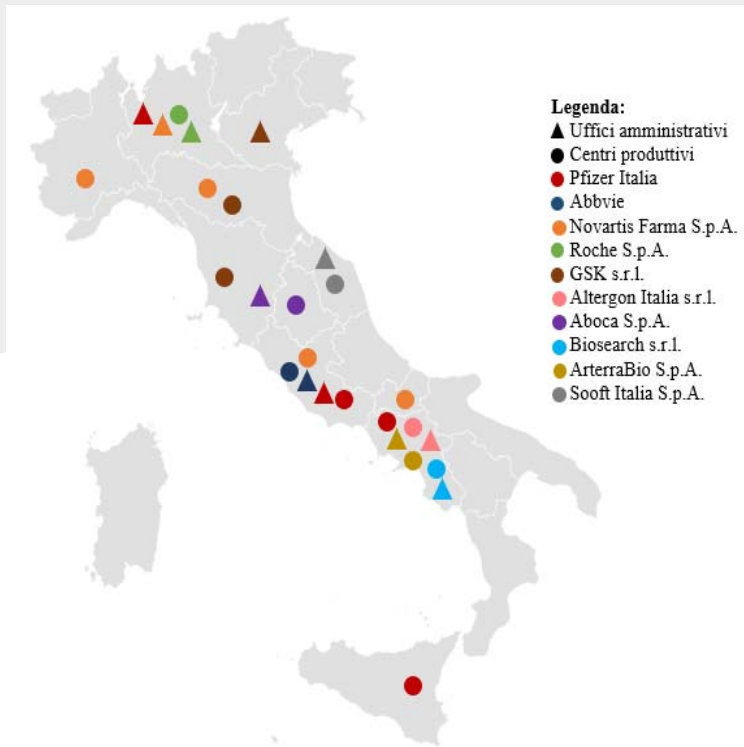
Geographical distribution



Con tecnologia Bing  
© GeoNames, Microsoft, TomTom

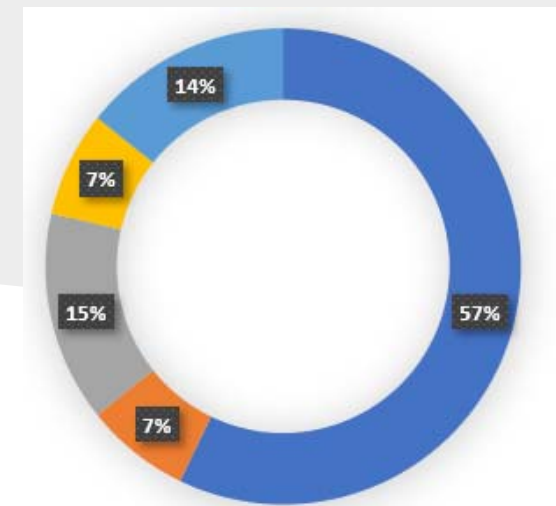
# The blue biotech Italian industry – pharma

## Geographical distribution



Only one SME (**BioSEArch s.r.l.**) is fully dedicated to the implementation of marine-based products

## Bioactivity



- Antitumor effect
- Vaccines
- Tissue repair
- Treatments for eye diseases
- Reducing tryglicerides in blood



# R&D investments in Blue Growth



**239 projects:**  
175 at EU level  
64 at Italian level



**Financing** for R&D:  
**101.631.490,59 €**



**47%** EU projects are  
coordinated by  
Italian  
organizations

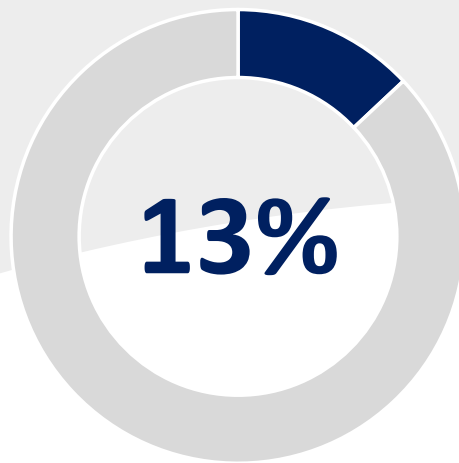


Projects related mainly  
to the "**Marine biotic  
resources**" topic



**461.961,32 €** average  
financing

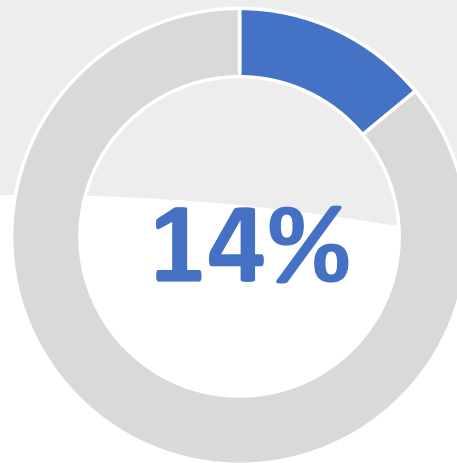
# R&D investments in Blue Growth – focus on blue biotechnology



**13%**

**PROJECTS**

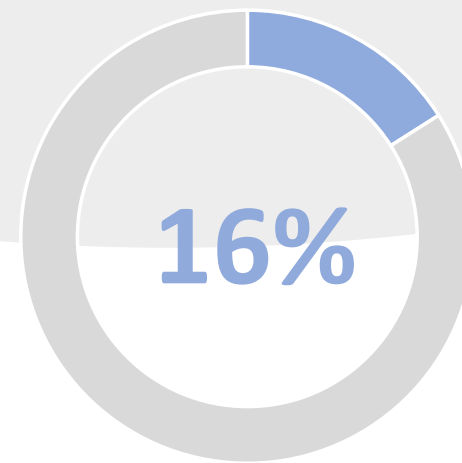
**31 funded  
projects**



**14%**

**FINANCING**

**14.303.130 €**



**16%**

**INVESTMEN**

**115.468.371 €**

# Main limitations for the development of blue biotech at industrial level

## TECHNOLOGICAL

- **No infrastructures** completely **dedicated** to marine biotechnology
- **Research organizations scattered** throughout the Italian territory and not integrated with each other
- Technical difficulties in **scaling up** the blue biotech processes

## ENVIRONMENTAL

- The marine environment is extremely **vulnerable**
- The most common alternative methods may have a negative impact on the environment
- Several dozen million tons of **waste from the fish industry**

## LEGAL

- **Regulatory fragmentation**
- **Poor collaboration** between university and industry

# Conclusions

- 1** The marine biotechnology sector is crucial to foster a sustainable growth in Italy
- The industrial landscape is still underdeveloped and the potential is relatively untapped **2**
- 3** Many limitations (technological, environmental and legal levels) are still hindering the full development of the sector
- Growing interest of the public and private research for this sector **4**
- 5** Microalgae especially for food applications are projected to lead the growth of the sector



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## Contacts

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