

TITOLO: Cellular Agriculture for Sustainable Transition Solutions: governance of value chains and business models

Progetto di ricerca

The current food system is insufficient and unsustainable, generating 17% of the total GHG emissions for animal farming while only supplying 18% of the global calories and 37% of the global proteins. The cultured meat (CM) and cultured seafood (CSF) industry is emerging to meet the growing demand of protein with promises of lower environmental footprint. However, the current knowledge on the impact of this sector is limited, based on developments that have not happened yet and lacking important considerations such as its social impact or its adaptability to current and future demand. Current race-to-market pressures, fueled by recent market approvals overseas, highlight the need to define a roadmap that can develop the sector in an ethical, sustainable and cost-competitive way. There is need for an effective reorganisation of the food system to establish resilient value chains in the EU.

There is need to better understand the economic and management implications of CM/CSF production methods, product types, supply and value chains as well as business models to provide balanced solutions that are not only sustainable by design and cost-efficient, but also ethically responsible, safe and nutritious, fair and inclusive.

The research fellow will support research activities aimed to:

- Literature Review: Conduct a comprehensive review of existing research, reports, and publications related to alternative protein foods and CM/CSF, including plant-based, cultured, and insect-based proteins; Analyze current agro-food policies and regulations that impact the production and consumption of alternative proteins.
- Data Collection and Analysis: Economic and financial data on companies producing and selling alternative protein foods and CM/CSF; Collect data on the production, consumption, and market trends of alternative protein foods and CM/CSF; Analyze the environmental, economic, and social impacts of alternative protein and CM/CSF production compared to traditional animal agriculture; Assess the nutritional and safety aspects of alternative protein products and CM/CSF.
- Stakeholder Interviews: Conduct interviews with key stakeholders, including government officials, industry representatives, NGOs, and consumers, to gather insights on their perspectives regarding alternative protein and CM/CSF policies and practices.
- Economic and financial analysis: companies statements analysis with horizontal and vertical assessment of main performance indicators; governance issues at chain level, power relations; merging and acquisitions analysis.
- Policy Mapping and Recommendations: Map out existing policies and regulations at the local, national, and international levels related to alternative protein and CM/CSF production, labeling, and marketing; Identify gaps or inconsistencies in the current policy landscape; Consider the economic and environmental implications of proposed policies.
- Case Studies: Analyse case studies of regions or countries that have successfully implemented policies to support the alternative protein and CM/CSF industry; Highlight best practices and lessons learned.
- Economic Analysis: Analyze the economic feasibility of alternative protein production and CM/CSF and its potential impact on the agro-food sector, including job creation and revenue generation.

- Research Paper Writing: Prepare research papers, reports, and policy briefs summarizing your findings and recommendations; Submit your work to academic journals, government agencies, and think tanks for dissemination.
- Collaboration: Collaborate with other researchers and institutions working on similar topics to ensure a coordinated and effective approach to policy research.

Piano di attività

The research fellow's activities aim to contribute to the analysis of economic aspects of alternative protein foods and CM/CSF industry aimed at supporting the food supply chain management and economic dimensions of alternative protein products and CM/CSF promotion. In particular, he/she will focus on:

- (i) data collection and gathering; database cleaning; download of ORBIS and STATISTA data;
- (ii) statistical-economic analysis of agri-food products in the European market for analysis along agri-food supply chains;
- (iii) literature review analysis and meta-reviews of sources useful for research activities;
- (iv) content analysis of focus groups transcriptions with specific software, such as NVIVO;
- (v) contributing to structuring and data collection through face-to-face interviews and focus groups with agri-food supply chain actors in Italian and English on business economic and financial issues;
- (vi) contributing to consumer data for a wider economic analysis;
- (vii) data processing through multivariate statistical techniques, including as example factor analysis, cluster analysis, regression.

The research activity will be conducted in English. The research fellow will work on FEASTS, funded by Horizon Europe (Grant Agreement Project 101136749).

The listed activities will be carried out under the supervision of Prof. Antonella Samoggia, scientific project leader and mentor.