

Master's Thesis Opportunity starting 15.03.2024

# Master Thesis in **Design of Platform Processes for Sustainable Cultured Meat Food Production**

## Background

As the demand for sustainable food production systems increases, there is a significant need to develop alternative sources of nutrition that can supplement or replace traditional agriculture. This project will focus on the design of innovative platform processes within the [FEASTS](#) (Fostering European Cellular Agriculture for Sustainable Transition Solutions) program. This Master thesis will focus on the creation of sophisticated process designs to enhance the sustainability and economic feasibility of cultured meat production.



**FEASTS**  
Fostering European Cellular Agriculture  
for Sustainable Transition Solutions



**Funded by  
the European Union**

## Objectives

- To create block flow diagrams outlining the process flow for the production of cultured meat.
- To investigate various components of the platform process including cell culture, media, scaffolding, bioreactors, and final product formulation.
- To evaluate the sustainability of these processes through waste treatment, recycling, and by-product recovery strategies.

## Tasks

- Develop and present multiple block flow diagrams for the cultured meat production process.
- Conduct a comprehensive analysis of the environmental impacts associated with each proposed process design, considering waste minimization and resource utilization.
- Collaborate with leading institutions and industry partners to integrate novel technology and scientific advancements into the platform process designs.

## Qualifications:

- Enrollment in a Master's program related to bioprocess engineering, chemical engineering, environmental science, or a comparable field.
- Above-average academic grades, demonstrating a strong understanding of engineering principles and scientific research methods.
- A solid foundation in bioprocesses, particularly those relevant to cell culture and bioreactor operation.
- Interest in sustainable food production and circular economy concepts.

We look forward to receiving your comprehensive application documents (grades, short motivation and preferred starting date). Please send them via email to [katharina.brenner@tum.de](mailto:katharina.brenner@tum.de).

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