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REVIEW

Shaping the Future Plate: Exploring the Safety Concerns of Cultivated and Conventional Meat Production

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Summary
In response to the growing global population and the unsustainable nature of current livestock agriculture, cultivated current mass livestock agriculture may no longer be sustainable. Our future depends heavily on developing new sources of food production. Exploration of new

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BeneMeat publishes scientific paper on the safety of cultivated meat

Czech biotechnology company BeneMeat has published a scientific paper focused on the safety of cultivated meat in the scientific journal Physiological Research. The publication, Shaping the Future Plate: Exploring the Safety Concerns of Cultivated and Conventional Meat Production, summarizes current scientific knowledge on key safety aspects of the technology while also identifying areas where further research is needed.

For BeneMeat, safety is not simply a regulatory requirement to be addressed before a product reaches the market. It has been an integral part of the technology's development from the very beginning. BeneMeat therefore takes steps in the area of safety that go beyond current regulatory requirements and, through this scientific publication, opens these topics to the wider scientific community.

The paper addresses, among other areas, the microbiological safety of cultivated meat production, the safety and stability of cell lines and their immortalization, genetic modifications, the composition of cultivation media, allergens, and nutritional profiles. It also examines how individual risks can be identified, controlled, and further assessed throughout development, production, and downstream processing.

"Addressing the safety of cultivated meat is essential to ensure consumer health, build market trust, and clear the regulatory hurdles required to scale a novel food technology," says **Petra Nevečeřalová, PhD,** R&D biologist at BeneMeat and lead author of the publication. *"BeneMeat thoroughly addresses safety, not only through extensive literature reviews, but also via diverse analytical testing."*

Through the publication, BeneMeat aims to contribute to a discussion on cultivated meat safety that is grounded in scientific evidence. The company believes that ensuring the safety of the technology should not be limited to meeting regulatory requirements, but should involve continuous assessment, transparency, and open scientific discussion.

Read the full scientific paper here:
https://www.biomed.cas.cz/physiolres/pdf/2026/75_645

Cultivated meat

Cultivated meat, also known as cultured meat or cell-based meat, is real animal meat produced by directly growing animal cells in a controlled environment instead of raising and slaughtering animals. The process begins with a small sample of animal cells, which are nourished with essential nutrients and guided to form muscle, fat, and connective tissue, replicating natural biological growth. The result is meat that is biologically identical to conventional meat but can be produced more sustainably, with lower environmental impact and improved animal welfare. A term Cultivated meat refers to meat (including muscle cells, fat cells, connective tissue, blood, and other components) produced by cultivating animal cells, not by slaughtering a live animal. (Source: New Harvest – a research institute that aims to accelerate progress in cellular agriculture).

BeneMeat

BeneMeat is a biotech company, part of the BTL Group, focused on developing scalable and efficient cultivated meat production technology. Since 2020, the company has developed deep, end-to-end expertise across biology, chemistry, hardware, software, and commercial implementation of cultivated meat. With 100+ R&D experts, BeneMeat is building the complete technological ecosystem, from versatile cell line development to scalable, reliable, and cost-effective manufacturing solutions. The company is

prepared to support manufacturers through all the key challenges of bringing cultivated meat to market: technical, legal, regulatory, and commercial. BeneMeat is the first in the EU to be registered as a producer of cultivated meat for pet food (Autumn 2023), proving our regulatory leadership in this space. *“We are not just another company in cultivated meat, we are the technology partner shaping its future.”*

For more information, contact: media@benemeat.com

Attachments

- **PR - Paper Physiological Research.docx**
  1.5 MB
- **LOGO BeneMeat (1).pdf**
  840.7 kB
- **A4 Cultivated Meat Flyer - ENG.pdf (1).pdf**
  2.0 MB
- **About company (1).pdf**
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- **Roman Kriz CEO BeneMeat-. (1).jpg**
  9.2 MB