

Technical report and impact analysis

This draft law lays down provisions prohibiting the production and placing on the market of synthetic foods.

Synthetic foods are the subject of numerous studies and consequent experimental applications not only carried out in the laboratory but also within companies that make such products. As far as synthetic foods are concerned, the main focus of research and production is on meat, which is the result of a cellular cultivation process carried out in the laboratory on stem cells (totipotent or multipotent), namely cells that can generate a wide variety of animal tissues if properly “conditioned”.

It should be stressed that, according to numerous studies conducted by experts and published in international journals, only a few research studies have briefly addressed the safety aspects of cultivated meat and, more generally, of the so-called synthetic food. In fact, it is highlighted that the impact of processing on aspects related to obtaining an optimal nutritional profile is still the subject of future research.

The status of research and testing on synthetic foods therefore appears to be at an embryonic stage, and it is not possible to rule out, especially from a scientific point of view, that such artificially produced foods do not have negative consequences for human health. The study carried out by Sghaier Chriki (ISARA, Agroecology and Environment Unit, Lyon, France) and Jean François Hocquette (INRAE, University of Clermont Auvergne, Vetagro Sup, UMR Her bivores, Saint-Genès-Champanelle, France) states, among other things: “*On the other hand, with this high level of cell multiplication, some dysregulation is likely as happens in cancer cells*”, Chriki, Sghaier, and Jean-François Hocquette, “The myth of cultured meat: a review”, *Frontiers in nutrition* (2020).

Therefore, it is not at all verified what effect the consumption of synthetic foods could have on human health. Furthermore, with regard to the sustainability of artificial products, there is no scientific evidence demonstrating potential environmental benefits: on the contrary, there is a lot of controversy on the matter. This topic is also discussed in some reports drafted by the International Panel of Experts on Sustainable Food Systems - IPES-FOOD (International group of experts and scientists on sustainable food systems, including a World Food Prize winner, co-chaired by Olivier De Schutter, the current UN Special Rapporteur on extreme poverty and human rights). In particular, they highlight that alternative proteins are not sustainable and put human health at risk.

It is also stressed that cultivated meats may require the use of antibiotics to ensure

sterile growth environments. Antibiotic residues can persist in products and contribute to the spread of antibiotic-resistant pathogens. Other hazardous materials are used during processing, from the lattice on which cells proliferate to disinfecting chemicals, which can leave residues in the final product. In addition, growing media such as foetal veal serum may be carriers of communicable diseases. A cultivated meat plant would also require continuous monitoring to ensure that cell lines do not change or contaminate, to reduce risks to human health (Woll, Silvia and Inge Böhm, *In-vitro meat: A solution for problems of meat production and meat consumption?*, *Ernaehrungs Umschau International*, January 2018 at 17; Ong, Kimberly J. et al., “Food safety considerations and research priorities for the cultured meat and seafood industry”, *Comprehensive Reviews in Food Science and Food Safety*, Vol. 20. 2021 at 5430 to 5432; Soice, Emily and Jeremiah Johnston, *Immortalizing cells for human consumption*, *International Journal of Molecular Sciences*, Vol. 22, October 2021).

In light of the above, and given the absence, presently, of specific legislation at European level, it was decided to intervene in a precautionary manner at national level to protect interests relating to health and cultural heritage.

The draft legislation aims to protect human health by laying down a prohibition on the production and marketing of synthetic foods in implementation of and respecting the precautionary principle set out in Article 7 of Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002.