

# CODEX ALIMENTARIUS COMMISSION



Food and Agriculture  
Organization of the  
United Nations



World Health  
Organization

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Agenda Item 10

FA55/CRD33  
Original Language Only

## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON FOOD ADDITIVES

#### Fifty-Fifth Session

#### COMMENTS OF The Good Food Institute (GFI)

(CAC Observer<sup>1</sup>)

#### Agenda item 10

The Good Food Institute (GFI)<sup>2</sup> is encouraged by the Codex Alimentarius Commission's (CAC) interest in new food sources and production systems (NFPS), including cell-based food production (hereafter referred to as cultivated food<sup>3</sup> production). GFI welcomes the increasing number of regulatory approvals for cultivated food production internationally and the recognition of the safety of this new form of food production.

The proposal for new work put forward jointly by Singapore and China inviting CCFA to consider developing guidelines for the conduct of food safety assessment of cell culture media components used in the production of cell-based foods (FA55/CRD06) presents an opportunity to develop harmonised international guidelines for new technologies. Such guidelines could contribute to a global sustainable food system, while ensuring sufficient flexibility for innovation within the emerging cultivated food industry. Therefore, GFI believes that CCFA should support this proposal for new work in a manner that utilizes a risk-based approach, allows for flexibility, and accommodates responsible innovation as cultivated food production develops and matures.

#### Rationale:

The proposal to develop guidelines for the conduct of food safety assessment of cell culture media components is presented as the sector expands and as it prioritizes ensuring consumer safety whilst fostering innovation and facilitating trade. This is highlighted by the fact that the past five years have seen cultivated food products from five companies approved in three different jurisdictions (Singapore, the United States, and Israel) while at least six additional jurisdictions (Australia, the Republic of Korea, Thailand, the European Union, the United Kingdom, and Switzerland) have started assessing their first applications. While the jurisdictions where cultivated meat is being brought to market are well-equipped to ensure its safety, Codex guidelines have the potential to increase the efficiency of the regulatory review process, harmonize trade, and provide a valuable starting point for regulators in jurisdictions where cultivated meat has not yet been introduced.

The work proposed by Singapore and China could potentially increase the efficiency of regulatory review processes by providing a common point of entry for industry and regulatory bodies to evaluate cell culture media components. Culture media, made primarily of water and basic nutrients such as amino acids, carbohydrates, salts, and vitamins, is used throughout the cultivated food manufacturing process to support the survival, growth, and differentiation of cells. Culture media inputs are assessed by manufacturers and regulators to determine whether they are safe for use in food or considered 'food safe.' Currently, most companies hold their customised media formulations as trade secrets and disclose them to regulators but not the public, which is a common practice

<sup>1</sup> See <https://www.fao.org/fao-who-codexalimentarius/about-codex/observers/detail/en/c/168889/>.

<sup>2</sup> The Good Food Institute (GFI) is a nonprofit civil society organization developing the roadmap for a sustainable, secure, and just protein supply. We identify the most effective solutions, mobilize resources and talent, and empower partners across the food system to make plant-based and cultivated meat accessible, affordable, and delicious. We are headquartered in the United States and have affiliates in Brazil, Europe, India, Israel, Japan, and the Asia-Pacific region. Regulatory Attorney, Mackenzie Battle, may be contacted at [mackenzieb@gfi.org](mailto:mackenzieb@gfi.org).

<sup>3</sup> In this document, the term "cultivated food" is used as a working terminology to indicate food produced through the culturing of cells isolated from animals. This includes cells isolated from poultry, bovine, porcine, fish and crustacean sources.

throughout the food manufacturing industry. Codex guidelines that describe how cell culture media inputs may be determined to be food safe using a risk-based approach, and that provide a non-exhaustive list of common inputs that allows for future additions, could help clarify the processes that companies and regulators use to bring cultivated food products to market.

Guidelines would be an appropriate vehicle for this information because they can aim to enhance the safety of cell culture media components by harmonizing global procedures for evaluation without hindering continued flexibility within the industry. Due to the nascency of the cultivated food sector, companies are regularly updating formulations and substances in their culture media, a time-consuming effort for both companies and regulatory reviewers. To avoid hampering efforts that have already been undertaken by companies and regulators, and to avoid needlessly impeding further innovation, if CCFA chooses to undertake the new work, it will be critical to ensure that the guidelines remain flexible and non-exhaustive throughout the drafting process. The discussion paper from Singapore and China aptly addresses this by noting that the proposed guidelines are intended to support responsible innovation in the rapidly evolving cultivated food sector.

A final consideration is that the cultivated food industry has already taken steps to support the development of guidelines for the conduct of food safety assessment of cell culture media components. Specifically, GFI Asia Pacific, in partnership with Vireo Advisors and the Future Ready Food Safety Hub, and with the support of the Singapore Food Agency, has developed a Safety Assessed Media Ingredient (SAMI) Framework (submitted for peer-reviewed publication, with a preprint [published here](#)).<sup>4</sup>

The SAMI framework is intended to be a resource for developing a harmonised international approach to safety assessments of media components in cultivated meat production, which can support the development of Codex guidelines through CCFA. An internationally recognised methodology could clarify when a media component is considered 'food safe.' The SAMI framework assists risk assessors in government, academia, and industry, providing a resource that is adaptable across jurisdictions.

The SAMI framework was developed with extensive industry input and feedback. Initially, 17 cultivated food sector companies contributed partial or full lists of their media formulations to facilitate the development of a SAMI list of 56 media components, which is the first public list of commercially relevant culture media components. Subsequently, the SAMI framework and list were reviewed through industry workshops at the Regulating the Future of Protein Production event in Amsterdam in October 2024 and the Roundtable on Novel Food Regulations organised by the Singapore Food Agency in November 2024. The SAMI framework and list received overwhelmingly positive feedback and support from the industry, highlighting that CCFA could leverage the SAMI framework methodology. GFI stands ready to provide more information about this framework, the cultivated food production industry, and cell culture media safety to CCFA and any working group or task force that may undertake new work related to the safety of cell-cultured foods.

If this new work proceeds, it will be crucial to develop flexible, harmonised guidelines as well as a public, non-exhaustive list of common culture media components used in cultivated food production that allows for future additions. CCFA can thereby support consumer safety as the industry expands, facilitate international trade, and support innovation by providing clear regulatory pathways.

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<sup>4</sup> Ong, K., Kukkk, K., Powell, D., Chen, W. N., Goh, S., & Shatkin, J. A. (2025). Development of a Safety-Assessed Media Ingredient (SAMI) Framework for Streamlined Safety Assessment of Cultivated Meat and Seafood Products. Preprints. <https://doi.org/10.20944/preprints202503.0374.v1>