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U.S. Department of Agriculture
Food Safety and Inspection Service
1400 Independence Avenue SW, Mailstop 3758
Washington, DC 20250–3700

RE: Docket No. FSIS-2020-0036: Labeling of Meat or Poultry Products Comprised of or Containing Cultured Animal Cells – Advance Notice of Proposed Rulemaking (Published September 3, 2021)

Dear Sir or Madam,

New Harvest appreciates the opportunity to provide insights about the labeling of meat and poultry products composed of or containing cultured animal cells.

Founded in 2004, we are the world's longest standing nonprofit devoted to advancing cellular agriculture. Our mission is to ensure that cellular agriculture delivers on its promises to create a more equitable & sustainable food system by ending our dependence on animal agriculture for our supply of animal protein. We fund public research and industry-wide initiatives to accelerate scientific breakthroughs and address shared challenges that transcend private interests.

We understand that access to public data about this new technology is still lacking. Therefore, we want to use this opportunity to share our perspective on this important topic based on our technical expertise and our commitment to foster collective responsibility among stakeholders.

We have chosen to address USDA FSIS's specific questions by the topics we consider relevant following the order below:

- [What is in a name?](#)
 - Questions 1, 2, 4, 5, 6, 7, and 13
- [What are 'cell-cultured' meat and poultry products?](#)
 - Questions 3 and 9
- [Is it meat or poultry?](#)
 - Questions 10 and 11
- [What claims could be used?](#)
 - Question 14

What is in a name?

Question 1

This question has been the source of considerable discussion. Studies have found that today's American consumer has a keen interest in understanding how their food is made (McKendree et al., 2014; Lusk & McCluskey, 2018). Given the novelty of these products, research has shown that consumer education will need to occur to foster trust in cell-cultured meat and poultry. Against this backdrop, New Harvest fully supports the use of a readily understandable, non-disparaging, simple and clear product category name that is factual and neutral.

To meet consumer expectations around understanding how their food is produced, we recognize that FSIS may consider developing guidance for voluntary disclosure. Voluntary labeling is not intrinsically bad but may be inadequate as a tool for objective information sharing with consumers. For example, letting market forces decide whether to disclose a consumer product is composed of or contains cultured animal cells could be counterproductive when there is still ambiguity regarding product attributes (e.g. nutrition and health information) and composition. From a branding standpoint, cell-cultured meat and poultry producers are incentivized to voluntarily differentiate their products from slaughtered meat or poultry (USDA Food Safety and Inspection Service, 2018). But there is an inherent risk that food producers may focus on the positive and not provide much information about product attributes if consumers find those attributes negative (Economic Research Service US Department of Agriculture, 2021).

Whether labeling is mandatory or voluntary, the lack of groundwork to establish criteria or standards based on independent public data is a major concern, as we will explain throughout this comment.

The production process for meat or poultry products composed of or containing cultured animal cells is novel and more complex than slaughtered-based meat processing. Moreover, the lack of public information regarding the cell-cultured production process is minimal, potentially increasing uncertainty and mistrust among consumers. Therefore, the need for transparency and openness to gain consumers' trust must be prioritized. Nitzko (2019) found that some of the most relevant food product transparency requirements were related to origin, components, and information about processing or production methods. We believe that these requirements should be taken into account when considering rules about the labeling of cell-cultured meat and poultry products.

A clear and transparent product name that provides consumers with simple information that is truthful and not misleading will be key to ensuring consumers are well informed. As the Food and Agriculture Organization of the United Nations (FAO) states, a label *"is one of the most important and direct means of communicating information to the consumer"* (FAO 2021). Consumers, especially younger generations, are becoming increasingly interested in knowing where their food comes from, how it is produced and the impact of their purchasing decisions on the environment and their health (Su et al., 2019). However, it has also been noted that too much complex information could result in information overload and confusion (Nitzko, 2019).

Studies show that consumers often lack the technical knowledge to understand novel food technologies, relying for the most part on information presented to them. (Siegrist & Hartmann, 2020; Sijtsema et al., 2018). Regulators are tasked to ensure that any terms used to describe foods are clear, science-driven, and in accordance with existing food standards to prevent consumers from being deceived. Likewise, food manufacturers need to consider consumers' social and ethical concerns as they relate to cell-cultured food products (Sijtsema et al., 2018). Thus, it is crucial to build trust in the cell-cultured meat and poultry industry and regulatory approval process from the outset. We believe that consumers should have access to simple and transparent information that enables them to choose the best option based on their individual preferences. This information can be conveyed in two distinct ways: (1) via qualifiers or disclaimers, that is, a distinct label element from the actual product name, or (2) via simple icons that can have the ability to transcend product categories (e.g., meat, poultry, and seafood) and markets while at the same time encourage simplicity and transparency in the food system (The Lexicon, n.d.).

FSIS writes in the ANPR that the Agency has only established new label requirements when *"a new method of production or processing alters the biological, chemical, nutritional, or organoleptic properties of meat or poultry to the extent that the resulting product no longer aligns with consumers' expectations"* 86 FR 49,491 at 49,493. Based on the aforementioned, new labeling requirements would not be needed to the extent that a cell-cultured meat or poultry product is scientifically proven to be equivalent to its conventionally produced counterpart from a compositional, nutritional and organoleptic standpoint. However, currently not enough public data are available to confirm equivalency to meat from slaughtered livestock or poultry.

Cell-cultured food products are projected to be developed on a spectrum of different compositions. We recognize that many products will be initially blended or hybrid (as we will describe later in this comment). Therefore, identifying where products fall on that range and what certain additional call-outs and labeling may be required for transparency should be prioritized. With a wide range of production methods, little public data, companies of various

vested interests, and an industry that is racing to get to market, we think FSIS should define the regulatory criteria (e.g. compositional, nutritional) or standards in close consultation with industry stakeholders and academic partners, thus facilitating the implementation of a consistent, descriptive modifier text that makes product naming simple, clear and non-disparaging.

Question 2

Multiple terms are used worldwide for meat and poultry produced from cell cultures rather than whole animals. When the first burger made from cell cultures was unveiled in 2013 by Dr. Mark Post, a common term hitting the headlines was ‘lab-grown’ (Chriki et al., 2020).

Fast forward to today, and we have seen other names, such as ‘test-tube,’ ‘clean,’ ‘cell-based,’ ‘cultured,’ ‘cell-cultured,’ ‘cultivated,’ ‘*in vitro*,’ ‘fake,’ among others (Post et al., 2020; Chriki & Hocquette, 2020; Ong et al., 2020; Chriki et al., 2020; Hallman & Hallman II, 2020).

We believe that any term that may be used in front of ‘meat,’ ‘beef,’ ‘pork,’ ‘chicken’ or any other species designation needs to be transparent as to the origin (i.e., cells rather than whole animals) and/or process (i.e., cell culture or cell cultivation instead of raising whole animals and slaughtering them). Further, it should not be easily confused for meat from whole animals or other sources such as mushrooms or plants. In addition, it would be highly desirable to use the same qualifiers for cell-cultured food products for which product labeling is regulated by the USDA as for cell-cultured food products regulated by the FDA.

We emphasize that terminology continues to be a topic of discussion in different jurisdictions. As of 2020, more than 70 companies were involved in the production of cell-cultured meat, poultry, and seafood around the world (Good Food Institute, 2021). A consensus is yet to be achieved (Hallman & Hallman II, 2020). Thus, the actual term(s) that make(s) it onto a label, including the name, will reflect different preferences based on consumers' interests, policies, and state of knowledge (The Food and Agriculture Organization of the United Nations & Woodhead Publishing Limited, 2010). Although we agree that naming will impact how consumers and other stakeholders might perceive the food produced with this technology, we consider it tangential to the fundamental science to develop it or the necessity to produce it safely.

Different studies show that, at this point in time, term preference is inconsistent among potential consumers and sectors with vested interest in this new technology (Bryant & Barnett, 2019; Asioli et al., 2018; Faustman et al., 2020; Ong et al., 2020; Chriki et al., 2020). For this reason, we believe that following a descriptive, rather than a prescriptive approach to naming is a more appropriate path to follow at this point in time. When we talk about a descriptive approach to

naming, we refer to conveying information in two distinct ways, as mentioned above in response to Question 1. First, we propose the use of a term or a disclaimer on the label. In the alternative, we propose the use of a simple icon that clearly conveys the general process or source of cell-cultured food products.

The means to access information about how food is produced are rapidly evolving, with social media and online tools switching the way we communicate (McKendree et al., 2014). Therefore, regardless of the term used, we believe that a certain degree of consumer education about the different terms currently in use highlights a need to increase food literacy. We also highlight that robust public consumer research, where the physical product is linked with information (e.g. claims, production method) and tested with a target consumer population, is still needed to get a more realistic picture of consumers' preferences (Sijtsema et al., 2018). In sum, New Harvest supports using a readily understandable, non-disparaging term or icon that, based on realistic consumer perception studies, is simple and transparent as mentioned in response to Question 1.

Questions 4

Terms such as 'lab-grown,' 'artificial,' and 'fake' are frequently used in the press; however, they have the potential to be misleading for consumers. Although cell-cultured food products have been produced at a small scale in facilities that resemble a laboratory, the reality is that these production processes will need to be scaled up to manufacturing facilities. As a result, the term 'lab-grown' would not reflect the nature of the products.

Conversely, terms such as 'artificial' or 'fake' are more nuanced. As defined by the Cambridge Dictionary, the term 'artificial' refers to *"made by people, often as a copy of something natural"* (Cambridge University Press, 2021). Following this definition, cell-cultured food products could be considered artificial because people make them to provide an alternative to meat from slaughtered animals, which could be regarded as the 'natural' counterpart. However, from a biological perspective, cell-cultured food products are made from cells that could be obtained directly from an animal. The latter argument could be used to bring forward the case that the origin of cell-cultured food products is not artificial, and is thus misleading to consumers. Likewise, the term 'fake' is defined as *"an object that is made to look real or valuable in order to deceive people"* (Cambridge University Press, 2021). Although some cell-cultured products may be proven to be the same as 'real' meat from slaughtered animals from a compositional, nutritional, and organoleptic perspective, others may be blended or hybrid and thus, considered 'fake' because they could look like 'real' meat from slaughtered animals. However, following the

exact definition, the term ‘fake’ could negatively convey the notion that companies are trying to deceive consumers.

Terms like ‘artificial’ and ‘fake’ can also cause consumers to further confuse cell-cultured products with plant-based alternatives (Chriki et al., 2020). Consumers with meat allergies or dietary restrictions may be misled by thinking the product does not contain animal cells.

Finally, the term ‘cultivation’ and ‘culture’ are commonly used for farmed fish including catfish (Global Seafood Alliance, 2019; Olaseni Musa et al., 2021; Baluyut, 1989). “Cultivation” also means *“to prepare land and grow crops on it, or to grow a particular crop,”* according to the Cambridge Dictionary (Cambridge University Press, 2021). Therefore, using either term, ‘cultivated’ or ‘cultured’ as a single qualifier to ‘fish’ or ‘meat’ would potentially confuse consumers into thinking the product is ‘farmed raised’ (Hallman & Hallman II, 2020).

In summary, whether the terms ‘artificial,’ ‘fake,’ ‘cultivated’ or ‘cultured’ are misleading will highly depend on how cell-cultured products are defined either from an origin or process perspective, and based on the best available data provided by stakeholders.

Question 5

With specific regard to terms that may have a negative impact on industry, we note that several studies have been focused on assessing consumers' perception of naming food products composed of or containing cultured animal cells (Asioli et al., 2018; Bryant & Barnett, 2019; Chriki & Hocquette, 2020; Hallman & Hallman II, 2020). Chriki & Hocquette (2020) summarized some of the findings, where terms such as 'artificial' and 'lab-grown' are more disliked than 'cultured' since they are linked to an unnatural product. However, others have found no difference in consumer attitudes and intentions when using the terms 'cultured' versus 'lab-grown' meat (Bryant & Barnett, 2019). But as Bryant (2019) highlights, studies on consumer perception can be highly variable (e.g. design of questions, regional likes and dislikes, language differences, and customary terminology) and thus are not necessarily comparable.

As we mentioned above, defining the terms that will be used to describe cell-cultured food products is essential to inform consumers. However, the industry is in its early stage. Establishing objective criteria that is based on sound scientific evidence (i.e. provenance vs process) to determine what constitutes cell-cultured meat and poultry is crucial to define appropriate terminology. We thus recommend that USDA refrain from prescribing specific naming terms until this information is more readily available.

Questions 6 and 7

We believe that cell-cultured meat and poultry products should bear transparent and clear labels that consumers can easily understand. Therefore, we suggest that FSIS expands the use of names for slaughtered meat and poultry products established by common usage, statute, or regulation to names or standards of identity of products derived from cell-cultured animal cells, provided that the term appropriately describes the particular food.

We also suggest that, in order to ascertain whether such terms may be used in the labeling of cell-cultured meat and poultry products, FSIS – together with industry stakeholders – considers the common understanding of such terms and whether the term appropriately conveys key attributes of a particular product, namely, its form or function. For example, the commonly used Dictionary.com defines ‘burger’ to include *“a food patty, or patty on a bun, containing ingredients other than beef.”* Therefore, the term ‘burger’ may be lawfully used in conjunction with an appropriate qualifier in the product name, such as ‘chickpea’ or ‘carrot’ burger or in the case of foods composed of cultured animal cells, the product name could include a qualifier such as ‘beef’ with an additional qualifier noting its cell-culture origin or process. On the other hand, for products containing other ingredients in addition to cultured animal cells, it will be important to use a qualifier that denotes the product is not entirely composed of cultured animal cells. These types of products have been commonly called ‘blended’ or ‘hybrid’ products (Newton & Blaustein-Rejto, 2021; Ong et al., 2021; Verbeke et al., 2015). Using common terms to describe products that resemble slaughtered meat and poultry products will allow consumers to be familiar with products and decrease food neophobia. As a result, we believe that these terms can be used as qualifiers to convey a transparent message to consumers.

As mentioned in response to Question 1, *“to the extent a cell-cultured meat or poultry product is scientifically proven to be equivalent to its conventionally produced counterpart from a compositional, nutritional and organoleptic standpoint,”* then new labeling requirements are not needed. However, it is worth noting that cell-cultured meat technology will no longer constrain the production of the typical ‘cuts’ of meat that we are used to seeing, such as ‘Pork Loin.’ Cell-cultured meat and poultry products have the potential to adopt a physical form, texture, and ingredients that are different from those of slaughtered meat and poultry, depending on the preferences of producers. In these cases, where the production method alters the biological, chemical, nutritional, or organoleptic properties of meat and poultry so that the products no longer align with consumers’ expectations, a similar approach to the ‘mechanically separated poultry (MSP)’ case stated in the ANPR may be needed 86 FR 49,491 at 49,493. On the other hand, simpler products could follow the path of the advanced meat recovery (AMR) systems case, where cell-cultured products will be comparable to slaughtered meat or poultry in terms of

their physical form, texture, and ingredients. Setting objective compositional criteria for cell-cultured meat and poultry products continues to be extremely important, and we emphasize the need to take the necessary steps to further inform other labeling criteria.

Question 13

As mentioned in response to Question 1, one of the most relevant food product transparency requirements is information about its components (Nitzko, 2019). Therefore, ensuring that consumers know what ingredients are used, including cell-cultured products, should be considered when thinking about labeling of further processed products containing cultured animal cells. We believe that the answers provided in response to Questions 6 and 7 also apply in this particular case.

What are ‘cell-cultured’ meat and poultry products?

Question 3

Creating a cell-cultured product gives the ‘freedom’ to combine plant-based ingredients, cell cultures, and/or slaughtered meat in as many different ways as the manufacturer wants (Ong et al., 2021). Hybrid products are likely to become the first path for introducing cell-cultured meat and poultry to the market, as we saw with the first-ever approved chicken nugget in Singapore in 2020 (Ong et al., 2021).

Although blending allows for endless innovation, it also poses a risk for food fraud and mislabeling in cases where no criteria or standards have been established (Stephens et al., 2018). The latter is needed to define what a cell-cultured product is and is not. Up until now, standardization has been lacking within the field of cellular agriculture. The ingredients, their amounts, components, and processes that are or are not appropriate and the characteristics of the final ‘cell-cultured’ meat or poultry products have yet to be developed and will influence the ingredient statement on the final food label. Therefore, we highly recommend that FSIS adopts objective criteria that define the nature and identity of foods composed of or containing cultured animal cells, as we believe this to be essential in informing the necessary labeling requirements to convey clear and transparent messages to consumers.

Question 9

Besides informing consumers about the type of food they are purchasing, determining the characteristics of a cell-cultured food product can also encourage transparency and accountability from the industry.

This novel technology and nascent industry will give manufacturers wide latitude to produce foods that can be as similar to slaughtered meat or as different as they desire. Therefore, it will be important to define criteria for the biological, chemical, nutritional, organoleptic, and composition of these products, including how much they must resemble slaughtered meat and poultry (Ong et al., 2021). These criteria should be informed by public research, which up until today, is minimum.

Present literature suggests that working at the cell- and tissue-levels allows tailoring the composition of cell-cultured products towards a diverse set of objectives, such as delivering healthier products (e.g. less cholesterol, more vitamins) or meat-quality enhancement (Stout et al., 2020; Simsa et al., 2019; Ong et al., 2021).

Establishing technically sound criteria or standards for the cell-cultured meat and poultry industry requires research and open discussions where technical experts from diverse sectors generate the data to back up the decision-making process and inform requirements and their compliance verification by the industry.

Is it meat or poultry?

Question 10 and 11

Animal cell-culture technology presents us with the opportunity to broaden the ways in which we produce meat and poultry, thereby challenging the longstanding presumption that all meat and poultry must be derived from a slaughtered animal. As it stands, the Federal Meat Inspection Act (FMIA), the Poultry Products Inspection Act (PPIA) and their respective implementing regulations expressly and impliedly refer to animal slaughter as the point of origin for ‘meat,’ ‘meat byproduct,’ or ‘meat food product,’ and ‘poultry product,’ or ‘poultry food product.’

In light of the advancements in animal cell-culture technology and the ability to produce these products outside the animal, strong consideration should be given to amending the statutes and implementing regulations to expressly clarify that ‘meat,’ ‘meat byproduct,’ ‘meat food product,’ ‘poultry product,’ and ‘poultry food product’ may also be produced outside the animal. From a

biological, chemical, nutritional, or organoleptic perspective, the tissue biopsy obtained from livestock to start a cell culture may be considered 'meat' as defined in 9 CFR 301.2. Conversely, the current definitions of 'poultry product' or 'poultry food product' refer to any product originating from a poultry carcass or parts thereof. As cells might not always come from slaughtered animals, cell-cultured poultry products do not squarely fit under current definitions.

However, the novel method(s) of processing tissue samples could or could not result in products that align with the former definitions and/ or with consumers' expectations. Some considerations that need to be assessed are: a) cells will be further processed (i.e. proliferated and differentiated), b) cells might or might not come from muscle tissue (e.g. embryonic cells or iPSCs), c) cells can be genetically engineered for mass production or quality enhancement, d) after cell harvesting, cells can be combined with (an)other component(s) or ingredient(s) such as scaffolds, slaughtered meat, or plant-based materials at different levels that have not been defined (Stephens et al., 2018; Ong et al., 2021; Faustman et al., 2020; Post et al., 2020).

As mentioned above, cell-cultured meat and poultry may originate from the same tissue as any other slaughtered meat and poultry product. This raises some concerns regarding allergies, mainly due to beef and chicken consumption (Restani et al., 2009). Thus, it is important that the definitions established in 9 CFR 301.2 and 9 CFR 381.1, respectively, consider the potential risk to public health due to allergenicity.

What claims could be used?

Question 14

Some stakeholders argue that cell-cultured products are safer, more environmentally friendly, and more ethical than slaughtered meat and poultry products, although these claims have not been definitely proven (Post et al., 2020; Ong et al., 2020). Some have even discussed whether these products could or could not comply with different religious statuses (Chriki & Hocquette, 2020). For marketing purposes, there is potential for companies to include special statements or claims, as defined in 9 CFR 412.1(e). However, due to the novelty of this technology, debates are still ongoing since most of the available data is speculative and in the early stages. Technological challenges such as substituting fetal bovine serum (FBS) in growth media, upscaling production, and the safe recycling of nutrient media need to be overcome before we can understand the true environmental impact of the industry (Treich, 2021). Below, we highlight a non-exhaustive list of broad topics that could be used as potential misleading product claims:

Cell-cultured products are animal-free

The use of FBS in the cell-cultured meat and poultry industry has been frequently discussed. It is one of the most expensive ingredients and its animal origin defeats one of the main objectives of the field, being animal-free. Another consideration is that bovine serum albumin has been linked to allergic reactions (de Silva et al., 2017; Chruszcz et al., 2013). Therefore, the presence of FBS in cell-cultured products could potentially influence other aspects of labeling and require further assessment regarding its presence in the final product. But FBS is not the only ingredient that may come from animals. Other inputs such as scaffolding materials, like collagen, traditionally have an animal origin too (Post et al., 2020). Besides, cells are also still obtained from animals through a biopsy (Post et al., 2020). Although a biopsy is frequently considered a painless procedure, the fact that animals are still needed could challenge this claim (Ong et al., 2020).

Companies and researchers are trying to find alternative sources for FBS and cell-line sources that do not come from an animal and are more cost-efficient, but more research and guidelines of what is accepted and what is not (e.g. use of FBS) are needed to support any potential claims related to animal ethics (Stout et al., n.d.; Ong et al., 2020).

Cell-cultured products are safer

One of the most common assumptions about cell-cultured meat and poultry products is that they will be safer than slaughtered meat due to the sterile conditions that are needed for cell growth. Although this can prevent microbial contamination, it will also mean that cell-cultured products may lack the microflora needed to produce what is known as ‘competitive inhibition,’ potentially making products more susceptible to pathogenic growth (Ong et al., 2021). Pathogenic bacteria such as *E. coli* O157, *Salmonella* and *Clostridium* are more prevalent in the environment in and around animals. Therefore, they are more prone to contaminate slaughtered meat and poultry (Heredia & García, 2018; Lund & Peck, 2015). However, contamination with these microorganisms could still occur post-harvest in a cell-cultured food establishment if appropriate preventive controls are lacking. The presence of pathogenic bacteria and other potential emerging biological hazards, such as *Mycoplasma* or viruses, needs to be further assessed (Ong et al., 2021).

There are also novel inputs, such as growth media components, that have not been used before for food production. It is still unknown whether these inputs might end up in the final product and if they might even pose a risk to human health (Ong et al., 2021; Ong et al., 2020).

Therefore, the novelty of this technology requires more in-depth research around potential hazards and the establishment of safe limits to back up any claims around cell-cultured meat's food safety profile.

Cell-cultured products are more sustainable

Cell-cultured food products have been considered an alternative to solve the environmental problems caused by conventional animal agriculture (Tuomisto, 2019; Tuomisto & Teixeira de Mattos, 2011; Stephens et al., 2018). However, the truthfulness of this claim needs yet to be confirmed. Several life cycle assessments have been published (Tuomisto & Teixeira de Mattos, 2011; Mattick et al., 2015; Smetana et al., 2015). For example, Tuomisto et al. suggested that cell-cultured meat could involve approximately 7-45% less energy consumption for other meats except poultry, 78-96% less GHG emissions, 99% less land use, and 82-96% less water consumption depending on the product, all when compared to slaughtered European meat processes (Tuomisto & Teixeira de Mattos, 2011). However, the outcomes are still anticipatory due to the lack of a working commercial-scale process and should not be interpreted as conclusive or definitive (Mattick et al., 2015).

Cell-cultured products and religions

Whether cell-cultured meat and poultry products are accepted within different religious communities (e.g. Jews, Muslims, Hindus) is still up for debate (Chriki & Hocquette, 2020). The origin of the cells and the use of FBS seem to be the most important topics to determine if these products will comply with specific religious laws (Chriki & Hocquette, 2020; Faustman et al., 2020). As such, additional research is needed to determine whether these products will comply with the requirements for making claims regarding religious standards, including kosher and halal claims. This will likely require a case-by-case assessment of the specific production processes used for cell-cultured foods.

Conclusion

The pressure to get products to market caused by the massive private investments could rush the entry of cell-cultured meat and poultry products to market in times when scientific uncertainty about this technology still exists (Treich, 2021). Several of the questions posed in this ANPR require better scientific understanding and more open sharing of data among the industry and other stakeholders to inform labeling requirements and market approvals that positively impact the field of cellular agriculture and society.

We have no doubt that we need to rethink the way we produce our food. Cellular agriculture and other rapidly growing emerging technologies provide us with a unique opportunity to reboot our

food system, including the regulatory system that governs it. Regulatory frameworks need to be redesigned to keep pace with innovation and technology and future-proof our food system. We cannot expect this technology to positively impact our food system when it is built on an outdated regulatory foundation and minimum public scientific data. Therefore, we strongly encourage FSIS to support the development of a robust regulatory basis that involves the co-creation of open evidence-based resources and engagement with experts to understand the critical needs of the field and inform decision-making processes, particularly as it relates to the labeling of cell-cultured food products.

We appreciate the opportunity to provide comments from our perspective. We are always open to any suggestions or questions regarding the information we have shared.

Sincerely,



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