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State Regulation of Cultured Meat: Would a Meat by Any Other Name Taste as Good?

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Introduction

As the global demand for meat rises, so has the demand for meat alternatives.¹ Any grocery store trip demonstrates a proliferation of plant-based alternatives to traditional meat products. These products have seemingly transitioned from being an alternative version of the product they mimic to an attempt to replace that product.² Where the former alternative to a traditional burger might have been a veggie or bean burger, which share few similarities outside of their general shape, more novel products such as the Impossible or Beyond Burgers now offer consumers a credible simulation of the real thing.³ In keeping with this trend, two companies were authorized to begin marketing and selling a new category of competition, lab-grown meat or “cultured meat,” to U.S. consumers in June of 2023.⁴

Even though cultured meat is the first alternative to offer consumers a choice to eat authentic meat without associated moral and environmental considerations, consumer acceptance has been low.⁵ Studies suggest that while nearly half of Americans would consider trying cultured meat, many remain unwilling because they perceive it to be unnatural, immoral, or unappetizing.⁶ Labeling of cultured meat is therefore essential as studies suggest that it can significantly impact consumer perception. In response to a perceived competition, lobbying groups for the traditional meat industry have petitioned their state legislators to enact laws restricting cultured meat

¹ Ishamri Ismail & Young-Hwa Hwang & Seon-Tea Joo, *Meat analog as future food: a review* (March 31, 2020) http://www.ejast.org/archive/view_article?pid=jast-62-2-111.

² *Id.*

³ *Id.*

⁴ <https://www.fda.gov/food/domestic-interagency-agreements-food-expired/formal-agreement-between-fda-and-usda-regarding-oversight-human-food-produced-using-animal-cell>.

⁵ Shahida Anusha Siddiqui & Sipper Khan & Muhammad Qudrat Ullah Farooqi & Prachi Singh & Ito Fernando & Andrey Nagdalian, *Consumer behavior towards cultured meat: A review since 2014* (December 1 2022) <https://www.sciencedirect.com/science/article/pii/S0195666322004056?via%3Dihub>.

⁶ *Id.*

products from labeling cultured meat with meat-related terms.⁷ More than a quarter of states have enacted such laws, creating a significant hurdle for acceptance of cultured meat as potential consumers are skeptical about trying it.⁸ At the same time, the Food and Drug Administration and the United States Department of Agriculture have confirmed that they will jointly regulate the production of cultured meat under powers provided to them in the Federal Drug and Cosmetic Act, the Federal Meat Inspection Act, and the Poultry Inspection Act.⁹

Legal challenges have been brought in several of these states, contesting the laws' validity based on First Amendment violations, dormant Commerce Clause violations, and federal preemption.¹⁰ With federal regulation being assumed, the question to be considered is whether states will share concurrent jurisdictional authority. This paper provides background on the production of traditional and cultured meat, details applicable regulatory regimes, and assesses the merits of legal challenges to state regulation to clarify future regulation. Part I introduces the marketplace for traditional meat, how the production system is organized, and highlights public criticisms. Part II discusses the production of cultured meat and its perception by the public. Part III introduces the regulatory scheme of state and federal regulation of both traditional and cultured meat. Finally, part IV analyzes challenges to state law based on the First Amendment, dormant Commerce Clause, and federal preemption challenges.

⁷ Christopher Bryant & Julie Barnett, *What's in a name? Consumer perceptions of in vitro meat under different names* (March 3, 2019) <https://www.sciencedirect.com/science/article/pii/S0195666318310948?via%3Dihub>.

⁸ Ala. Code § 2-17-10; Ark. Code Ann. § 2-1-301; O.C.G.A. § 26-2-152; Ky. Rev. Stat. § 217.035; La. Rev. Stat. § 3:4744(B)(11); Miss. Code Ann. § 75-35-15; MO. ANN. STAT. § 265.494 (West 2020); Mont. Code Ann. § 81-9-217; N.D. Cent. Code § 4.1-31-05.1; S.C. Code Ann. § 47-17-510 (2019); Tex. Health & Safety Code Ann. § 431.0805 (West); S.D. Codified Laws §§ 39-4-26; Wyo. Stat. Ann. § 35-7-119 (2019).

⁹ USDA & FDA, Press Release, *USDA and FDA Announce a Formal Agreement to Regulate Cell-Cultured Food Products from Cell Lines of Livestock and Poultry* (No. 0027.19, 7 Mar. 2019) <https://www.fda.gov/food/domestic-interagency-agreements-food-expired/formal-agreement-between-fda-and-usda-regarding-oversight-human-food-produced-using-animal-cell>.

¹⁰ *Turtle Island Foods, SPC v. Richardson*, 425 F. Supp. 3d 1131 (W.D. Mo. 2019); *Turtle Island Foods SPC v. Soman*, 632 F. Supp. 3d 909, (E.D. Ark. 2022); *Turtle Island Foods SPC v. Strain*, 594 F. Supp. 3d 692, 702 (M.D. La. 2022).

1. Background on Traditional Meat

1.1 Demand

Global meat consumption has more than doubled since 1990, with production growing from 150 million tons to 340 million tons today.¹¹ This increase is mainly attributed to the world's population growth, although Asia and other developing nations have also seen significant income driven growth in per capita consumption¹². The United States remains the largest meat consumer¹³ although the total per capita consumption has only marginally increased over the last two decades.¹⁴ However, the United States has experienced a change in types of meat being consumed, with a significant increase in the consumption of poultry paired against a slight decline in beef consumption over the last decade.¹⁵

1.2 Poultry Production in the United States

The United States has primarily expanded poultry production to meet increased domestic demand and to support a growing international market.¹⁶ The term poultry is a categorical term generally used to describe the production of turkey, chicken (“broilers”), and Peking duck, although the latter represents a much smaller share of total production. From 2013 to 2022, the United States saw an increase in broiler production from 17.2 million metric tons to 21 million in 2022.¹⁷ Since total exports of broilers slightly decreased over that period, much of that was

¹¹ M. Shahbandeh, *Meat consumption worldwide from 1990 to 2021*, by meat type (September 19, 2023) <https://www.statista.com/statistics/274522/global-per-capita-consumption-of-meat/>.

¹² Martin Parlasca and Matin Qaim, *Meat Consumption and Sustainability* (April 25, 2022) <https://www.annualreviews.org/doi/pdf/10.1146/annurev-resource-111820-032340>.

¹³ Carrie R. Daniel et al., *Trends in meat consumption in the United States* (November 12, 2010) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3045642>.

¹⁴ James S. Drouillard, *Current situation and future trends for beef production in the United States of America* (Jun 8, 2018) <https://www.animbiosci.org/journal/view.php?doi=10.5713/ajas.18.0428>.

¹⁵ Neus Gonzalez et al., *Meat consumption: Which are the current global risks? A review of recent* (May 29 2020) <https://www.sciencedirect.com/science/article/pii/S0963996920303665?via%3Dihub>.

¹⁶ Christopher G. Davis et al., *Assessing the Growth of U.S. Broiler and Poultry Meat Exports* (November 2013) <https://www.ers.usda.gov/publications/pub-details/?pubid=37532>.

¹⁷ USDA, *Poultry Sector at a Glance*, <https://www.ers.usda.gov/topics/animal-products/poultry-eggs/sector-at-a-glance/#:~:text=Total%20poultry%20sector%20sales%20in,broilers%20increased%20production%20from%202021>.

seemingly domestically consumed.¹⁸ This growth is expected to continue by 17.8% through 2030.¹⁹ Feed is the most significant cost input in broiler production, and countries that can produce it themselves, like Brazil and the United States, have a significant competitive advantage.²⁰ In the United States, soybeans and corn are produced abundantly and used primarily as feed for livestock,²¹ which has helped them become the second largest poultry exporter.²²

While demand has been a significant driver of increased production, advances in efficiency have also been made through the genetic selection of breeders, which reduced the time necessary to reach its slaughter weights.²³ Growing a broiler in 1992 took an average time of 52 days, while in 2018, the average has decreased to just 41 days.²⁴ Poultry production begins at hatcheries, where selected breeders lay eggs and give birth to hatchlings.²⁵ “Breeders” are chosen based on their genetic potential to hatch broiler chicks that grow quickly.²⁶ The broiler chicks are transported to feed mills, where they continue to grow until they are transported to a processing plant after reaching a specified weight.²⁷ Feed mills are large climate-controlled indoor spaces where broilers are grown.²⁸ It is common for production to be managed by “integrated” poultry

¹⁸ *Id.*

¹⁹ Philip H. W. Mak et al., *Production systems and important antimicrobial resistant-pathogenic bacteria in poultry: a review* (December 14, 2022) <https://jasbsci.biomedcentral.com/articles/10.1186/s40104-022-00786-0>.

²⁰ USDA, *supra* note 17.

²¹ *Id.*

²² Amber Waves, *Poultry Expected To Continue Leading Global Meat Imports as Demand Rises* (August 01, 2022) <https://www.ers.usda.gov/amber-waves/2022/august/poultry-expected-to-continue-leading-global-meat-imports-as-demand-rises/>.

²³ D. R. Korver, *Review: Current challenges in poultry nutrition, health, and welfare* (March 7, 2023) https://www.sciencedirect.com/science/article/pii/S1751731123000514?via%3Dihub_

²⁴ *Id.*

²⁵ Darrin Karcher & Joy Mench, *Overview of commercial poultry production systems and their main welfare challenges* (January 2018) <https://www.sciencedirect.com/science/article/pii/B9780081009154000014>.

²⁶ *Id.*

²⁷ James M. MacDonald, *The Economic Organization of U.S. Broiler Production* (June 2008) https://www.ers.usda.gov/webdocs/publications/44254/12067_eib38_1_.pdf.

²⁸ Karcher and Mench, *supra* note 25.

firms that issue production contracts to individual farmers who run hatcheries, feed mills, and processing plants.²⁹

1.3 Beef Production

Distinct from poultry, beef production is typically horizontally integrated with cattle changing ownership many times before slaughter.³⁰ Production starts with “cow-calf” operations, where cattle are inseminated to facilitate the birth of new calves.³¹ Once the calves have been weaned and gradually separated from the mother, they are generally sold to stocker operations, feedlots, and backgrounding operations.³² Each operation works to grow the cattle’s weight and prepare it for slaughter.³³ Stocker operations typically purchase cattle for short periods, such as six months, and allow them to graze on their land, selling them later at a higher weight.³⁴ Backgrounding operations only differ because they feed the animals in northern states where snow may cover pastures.³⁵ Both of these operations generally sell their cattle to a feedlot where they are provided with a nutrient-rich diet of cereal grain byproducts to grow them to a slaughter weight.³⁶

The slaughterhouse industry has consolidated significantly over the last 50 years, and larger slaughterhouses now process the majority of cattle.³⁷ In 1977, the top four slaughterhouses

²⁹ USDA, *supra* note 17.

³⁰ James S. Drouillard, *Current situation and future trends for beef production in the United States of America* (Jun 8, 2018) <https://www.animbiosci.org/journal/view.php?doi=10.5713/ajas.18.0428>.

³¹ Sara Short, *Characteristics and Production Costs of U.S. Cow-Calf Operations* (November 16, 2001) <https://www.ers.usda.gov/publications/pub-details/?pubid=47151>.

³² James S. Drouillard, *supra* note 29.

³³ *Id.*

³⁴ Marcia I. Endres & Karen Schwartzkopf-Genswein, *Overview of cattle production systems* (January 2018) <https://www.sciencedirect.com/science/article/pii/B9780081009383000012>.

³⁵ North Dakota State University, *Backgrounding Cattle* (accessed October 24, 2023) <https://www.ndsu.edu/agriculture/ag-hub/ag-topics/livestock/beef/production/backgrounding-cattle>.

³⁶ James MacDonald et al., *Consolidation in U.S. Meatpacking* (February 2000) <https://www.ers.usda.gov/publications/pub-details/?pubid=41120>.

³⁷ *Id.*

controlled just 25% of slaughter output, but the top four (Tyson Foods Inc., Cargill, National Beef Packing Co., and JBS) as of 2018 control 85% of slaughter output.³⁸ These slaughterhouses generally house cattle in densely populated pens until processing.³⁹ The cattle are killed, skinned, bled, cooled, and finally cut into packageable portions or transferred to another facility for packing.⁴⁰

1.4 Public Criticism

The meat industry has faced widespread criticism from animal rights, environmental, and social welfare activists who argue that their conduct is morally wrong, adversely impactful to the environment, and creates unsafe work conditions for its employees.⁴¹ From a moral perspective, they argue that conditions are inhumane before death, as animals are generally held in spaces that keep them closely confined with only standing room.⁴² They further point out painful procedures such as removing horns and injecting growth hormones to promote faster tissue growth.⁴³ Finally, some argue that animals have an inherent interest in life and it morally wrong to deprive them of it.

On an environmental front, livestock significantly contributes to atmospheric methane and carbon dioxide, which are greenhouse gases that contribute to climate change. Agriculture

³⁸ Tom Polansek, *Explainer: How four big companies control the U.S. beef industry* (June 17, 2021) <https://www.reuters.com/business/how-four-big-companies-control-us-beef-industry-2021-06-17/>.

³⁹ Meat News Network, *Video Tour of Beef Plant Featuring Temple Grandin*, YouTube (Aug 23, 2012), <https://www.youtube.com/watch?v=VMqYYXswono>.

⁴⁰ *Id.*

⁴¹ Brodie Evans & Hope Johnson, *Contesting and reinforcing the future of 'meat' through problematization* (October 2021) <https://www.sciencedirect.com/science/article/pii/S0016718521002700?via%3Dihub>.

⁴² *Id.*

⁴³ *Id.*

operations contribute as much as 14.5% of global greenhouse gases.⁴⁴ Further, the meat industry is a considerable consumer of water and a contributor to soil pollution.⁴⁵

Groups also highlight that slaughterhouse employees are subjected to both mental and physical workplace hazards.⁴⁶ Studies have found that other similar work environments absent of slaughter have a statistically significant decrease in psychological disorders, suggesting slaughterhouses have a unique impact on an employee's mental state.⁴⁷ Slaughterhouse employees have greater exposure to biological agents such as brucellosis, LA-MRSA, and Q Fever.⁴⁸ Although the cause is undetermined, the Occupational Safety and Health Administration (OSHA) has found that meatpacking workers are at an increased risk of lung cancer potentially from exposure to chemicals utilized during slaughter and packaging processes.⁴⁹

2. Introduction to Cultured Meat

2.1 History of Cultured Meat

Demand for alternatives to traditional meat has been primarily driven by criticism of the traditional meat industry and health awareness trends in consumer trends.⁵⁰ Meat analogs, a term describing a product that imitates meat, were used as early as 1960 and typically were soy-based.⁵¹ In the early 2000s, meat analogs created from texturized vegetable protein entered the

⁴⁴ Guihan Jiang et al., *Strategies for Sustainable Substitution of Livestock Meat* (September 3, 2020) <https://www.mdpi.com/2304-8158/9/9/1227>; Oliver Lazarus et al., *The climate responsibilities of industrial meat and dairy producers* (March 25, 2021) <https://link.springer.com/article/10.1007/s10584-021-03047-7>.

⁴⁵ Evans & Johnson, *supra* note 40.

⁴⁶ Jessica Slade & Emma Alleyne, *The Psychological Impact of Slaughterhouse Employment: A Systematic Literature Review* (October 13, 2021) <https://journals.sagepub.com/doi/full/10.1177/15248380211030243>.

⁴⁷ *Id.*

⁴⁸ Occupational Safety and Health Administration, *Hazards and Solutions*, <https://www.osha.gov/meatpacking/hazards-solutions>.

⁴⁹ *Id.*

⁵⁰ Ishamri Ismail & Young-Hwa Hwang & Seon-Tea Joo, *Meat analog as future food: a review* (March 31, 2020) http://www.ejast.org/archive/view_article?pid=jast-62-2-111.

⁵¹ *Id.*

mainstream marketplace.⁵² The last decade brought alternatives that closely resemble traditional meat, such as the “Beyond Burger” and the “Impossible Burger,” derived from texturized vegetable protein.⁵³ The Impossible Burger even looks to simulate meat through a patented process to produce “heme protein” that gives it the same bleeding effect of traditional meat.⁵⁴

In 2013, Mark Post demonstrated that meat could be grown in a laboratory to create “cultured meat.”⁵⁵ He did so by unveiling the first cultured-meat burger at an exhibition in London, estimated to cost over \$325,000 to produce.⁵⁶ To create the burger, Post used a process called “in vitro,” which utilizes a sample of harvested animal cells from an animal and seeks to suspend those samples in a medium where they will grow.⁵⁷ While the burger's cost highlighted the challenges he would face in making the product marketable to general consumers, his accomplishment proved that meat could functionally be created without ending an animal's life. Nearly two years later, the same group lowered production costs to \$11.36.⁵⁸ Despite this cost reduction, cultured meat production has yet to reach the general marketplace for consumers.

2.2 Production

Cultured meat production starts with selecting an appropriate animal to breed but only harvests a small sample of the animal's stem cells.⁵⁹ The collected stem cells are non-specialized cells that can be converted into highly specialized cells by self-renewing and developing into

⁵² *Id.*

⁵³ *Id.*

⁵⁴ Kevin Sforza, *It's Just "Meat": Traversing Lab-Grown Meat Labeling and Safety Regulations to Combat Food Scarcity and Climate Change*, 5 ADMIN. L. REV. ACCORD 245 (2020).

⁵⁵ Silvia Woll, Inge Böhm, *In-vitro meat: A solution for problems of meat production and meat consumption?* (October 19, 2017) https://www.ernaehrungs-umschau.de/fileadmin/Ernaehrungs-Umschau/pdfs/pdf_2018/01_18/EU01_2018_Special_invitro_englisch.pdf.

⁵⁶ *Id.*

⁵⁷ Shijie Ding et al., *Perspectives on cultured meat* (December 14, 2021) <https://www.maxapress.com/article/doi/10.48130/FMR-2021-0003>.

⁵⁸ Silvia Woll, *supra* note 54.

⁵⁹ Ding et al., *supra* note 58.

many types of cells, such as muscle or fat cells.⁶⁰ These muscle or fat cells are generally co-cultured together in an attempt to match the fat content of traditional meat.⁶¹ The cells are placed in a nutrient-rich medium where they replicate. The bioreactors in which this occurs contain an edible scaffolding that assists in growing the cells into a shape consistent with traditional meat.⁶² These scaffolds must be created with collagen or cellulose to be edible, as they are part of the final product.⁶³

2.3 Consumer Demand

The success of cultured meat will largely rely on the consumer's response and acceptance of it as an alternative to meat.⁶⁴ Since it is a novel product not yet in the marketplace, gauging consumer receptiveness is difficult.⁶⁵ Therefore, studies have inquired into consumers' reasoning for their views. A 2018 study found that just 40% of Americans would consider eating cultured meat,⁶⁶ primarily because they found it to be immoral and unnatural, believed that it posed a potential health risk, and reacted with disgust that it was produced in a laboratory.⁶⁷

A critical element in increasing consumer receptiveness, especially for novel products where consumers have little information to base their consideration on, is how a product is labeled.⁶⁸ Studies have found that consumers prefer specific labels and are most likely to respond

⁶⁰ Fakhar Islam et al., *Health benefits, importance, and challenges during production of cultured meat: An overview* (July 6, 2023) <https://doi.org/10.1080/10942912.2023.2230382>.

⁶¹ *Id.*

⁶² *Id.*

⁶³ Ding et al., *supra* note 58.

⁶⁴ Shahida Anusha et al., *Consumer behavior towards cultured meat: A review since 2014* (December 1 2022) <https://doi.org/10.1016/j.appet.2022.106314>.

⁶⁵ Maria Mancini & Federico Antonioli, *To What Extent Are Consumers Perception and Acceptance of Alternative Meat Production Systems Affected by Information? The Case of Cultured Meat* (April 10, 2020) <https://doi.org/10.3390/ani10040656>.

⁶⁶ Shahida Anusha et al., *Consumer behavior towards cultured meat: A review since 2014* (December 1 2022) <https://doi.org/10.1016/j.appet.2022.106314>.

⁶⁷ *Id.*

⁶⁸ Maria Cecilia Mancini & Federico Antonioli, *To What Extent Are Consumers' Perception and Acceptance of Alternative Meat Production Systems Affected by Information? The Case of Cultured Meat* (April 10, 2020) <https://www.mdpi.com/2076-2615/10/4/656>.

positively to either “clean meat,” “cultured meat,” or “animal free meat,” and most likely to respond negatively to “lab-grown meat.”⁶⁹ Another study found that consumers prefer cultured meat to be labeled differently from traditional meat.⁷⁰ These studies highlight how vital labeling is for cultured meat to gain acceptance and traction in this competitive marketplace.

3. Regulation

3.1 Federal Regulation

Regulation for food labeling is generally split between the Food and Drug Administration (“FDA”) and the United States Department of Agriculture (“USDA”).⁷¹ The FDA is generally responsible for regulating the labeling and production of all food products except eggs, meat, and poultry, which the USDA regulates.⁷² The two departments share regulatory authority in meat products that contain additives.⁷³ The USDA, which derives its authority from the Federal Meat Inspection Act (“FMIA”) and the Poultry Products Inspection Act (“PPIA”), utilizes its Food Safety Inspection Service (“USDA-FSIS”) for the majority of its inspection responsibility.⁷⁴

Trade associations initially promulgated federal regulation of cultured meat. In February 2018, as a competitor to cultured meat, the United States Cattle Association (“USCA”) petitioned the USDA to refine the definition of “meat” to be “product from cattle born, raised, and harvested in a traditional manner”⁷⁵ arguing that consumer has a right to know, and that no other

⁶⁹ *Id.*

⁷⁰ 10-Are consumers willing to pay for in vitro meat?

⁷¹ Kate Sollee, *The Regulation of Lab-Grown Meat under Existing Jurisdictional Authority*, 25 J. HEALTH CARE L. & POL’y 289 (2022).

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ U.S. Cattlemen’s Ass’n, *PETITION FOR THE IMPOSITION OF BEEF AND MEAT LABELING REQUIREMENTS: TO EXCLUDE PRODUCTS NOT DERIVED DIRECTLY FROM ANIMALS RAISED AND SLAUGHTERED FROM THE DEFINITION OF “BEEF” AND “MEAT” 1* (2018), https://www.fsis.usda.gov/sites/default/files/media_file/2020-07/18-01-Petition-US-Cattlement-Association020918.pdf.

laws had been instituted to regulate its definition.⁷⁶ In response, the FDA and USDA-FSIS jointly held a stakeholder meeting on October 23rd, 2019, where they heard from advocates such as the Good Food Institute and Memphis Meat, and critics including the North American Meat Industry, the USCA, the National Cattlemen’s Association, the National Chicken Council, and others.⁷⁷ Those critics argued for broad regulation of cultured meat and, more specifically, labeling restrictions.⁷⁸ A representative for the American Meat Association argued “that there is not enough scientific information to conclude that cultured animal tissue should be called meat.” Perdue Farms in turn, advocated that the term “clean” should be avoided because it was ambiguous, and a representative from the National Chicken Council furthered that using the term “meat” disparages conventional meat.⁷⁹

On March 7th, 2019, the FDA and USDA-FSIS formally agreed to regulate cultured meat jointly.⁸⁰ The FDA would regulate the premarket production such as collection and growth of the cells and the USDA-FSIS would be responsible for post-harvest inspections and labeling.⁸¹ The agreement’s only mention of labeling stated the USDA would “develop additional requirements to ensure the safety and accurate labeling of human food products derived from the cultured cells of livestock and poultry subject to the FMIA and PPIA.”⁸² However, the USDA has not yet clarified specific labeling requirements, and instead, in a directive issued on June 21st, 2023,

⁷⁶ *Id.*

⁷⁷ USDA, *Transcript of USDA and FDA Joint Public Meeting on the Use of Cell Culture Technology to Develop Products Derived from Livestock and Poultry* (23 Oct 2018) <https://www.fsis.usda.gov/news-events/events-meetings/usda-and-fda-joint-public-meeting-use-cell-culture-technology-develop>.

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ U.S. Foods & Drug Admin., *Formal Agreement Between FDA and USDA Regarding Oversight of Human Food Produced Using Animal Cell Technology Derived from Cell Lines of USDA-amenable Species* (7 Mar 2019) <https://www.fda.gov/food/domestic-interagency-agreements-food-expired/formal-agreement-between-fda-and-usda-regarding-oversight-human-food-produced-using-animal-cell>.

⁸² *Id.*

indicated that labels were not authorized for generic approval and must instead be individually approved.⁸³ On that same date, the USDA approved two companies, Good Meat and Upside Foods, to begin producing, marketing, and selling cultured poultry products to the general public.⁸⁴ That same month, Upside Food announced that it had received regulatory approval by the USDA for a label that included the name “cell-cultivated chicken.”⁸⁵

3.2 State Regulation

While the USDA and FDA agreed to jointly regulate under the FMIA, the PPIA, and the FDCA, states began enacting legislation regulating the labeling of cultured meat by preventing them from using the word “meat” on their packaging. Missouri was the first state to do so in August of 2018 by prohibiting meat producers from misrepresenting a product as meat not derived from “harvested livestock or poultry.”⁸⁶ Mississippi passed a law stating that “[a] food product that contains cultured animal tissue produced from animal cells cultured outside of the organism from which it is derived shall not be labeled as meat or a meat food product.”⁸⁷ Kentucky’s legislature passed a statute which states that “[a] food shall be deemed to be misbranded..... [i]f it purports to be or is represented as meat or a meat product and it contains any cultured animal tissue produced from in vitro animal cell cultures outside of the organism from which it is derived.”⁸⁸ In total, thirteen states have passed legislation prohibiting cultured

⁸³ USDA, *Directive 7800.1* (June 21, 2023) <https://www.fsis.usda.gov/policy/fsis-directives/7800.1>.

⁸⁴ USDA, *Good Meat Inc.* (June 21, 2023) <https://www.fsis.usda.gov/inspection/fsis-inspected-establishments/good-meat-inc.>; USDA, *Upside Foods, Inc.* (June 21, 2023) <https://www.fsis.usda.gov/inspection/fsis-inspected-establishments/upside-foods-inc.-shellmound-plant>.

⁸⁵ Lisa Benson & Joel Greene, Cong. Rsch. Serv., R47697, *Cell-Cultivated Meat: An Overview* (2023); Upside Foods, *UPSIDE is approved for sale in the US! Here’s what you need to know* (June 21 2023) <https://upsidefoods.com/blog/upside-is-approved-for-sale-in-the-us-heres-what-you-need-to-know>; *USDA approves ‘cell-cultivated’ chicken label* (June 14, 2023) <https://www.fooddive.com/news/usda-cell-cultivated-chicken-label-upside-foods-eat-just/652975/>.

⁸⁶ MO. REV. STAT. § 265.494(7).

⁸⁷ Miss. Code Ann. § 75-35-15.

⁸⁸ Ky. Rev. Stat. § 217.035.

meat from being considered meat, effectively preventing the word “meat” from being utilized on the label of products containing cultured meat.⁸⁹

4. Challenges to State Authority to Regulate

As states enact legislation to restrict the labeling of cultured meat, questions arise over their capacity to regulate due to constraints imposed under the dormant Commerce Clause, First Amendment, and federal preemption under the FMIA and FDCA. First Amendment challenges seek to invalidate both state laws that prohibit labeling with meat-related terms and laws that require disclosure that products are cultured meat with qualifier terms such as “lab-grown,” “cell-cultivated,” or “cultured.” Ultimately, state laws prohibiting meat terms face a significant likelihood of invalidation, but laws requiring disclosure that a product is cultured meat would likely withstand such challenges.

4.1 First Amendment Challenges

Before Missouri’s law became effective in 2018, Turtle Island Foods, a producer of vegan tofu products, filed a class action pre-enforcement suit seeking a preliminary injunction from its enforcement in addition to a ruling that among other challenges, it violated their free speech protections.⁹⁰ Turtle Island Foods also launched challenges in a number of other states, such as Arkansas and Louisiana, which reached differing conclusions in each district.⁹¹ In Missouri, the district court refused to enjoin the law, finding that while Turtle Island Foods met the standard to certify its class, they failed to demonstrate a substantial likelihood of success on their First

⁸⁹ Madyson Fitzgerald, *Was that chicken cutlet grown in a lab? These states want you to know*, Missouri Independent (1 Sep 2023) <https://missouriindependent.com/2023/09/01/was-that-chicken-cutlet-grown-in-a-lab-these-states-want-you-to-know/#:~:text=Arkansas%2C%20Kentucky%2C%20Mississippi%2C%20Montana%2C%20North%20Dakota%2C%20South,the%20authority%20to%20enforce%20meat%20labeling%20practices>.

⁹⁰ *Turtle Island Foods, SPC v. Richardson*, 425 F. Supp. 3d 1131 (W.D. Mo. 2019).

⁹¹ *Id.*

Amendment Claims.⁹² The case has yet to reach an overall conclusion.⁹³ In Arkansas and Louisiana, both district courts issued an injunction concluding that Turtle Island Foods had demonstrated success on the merits.⁹⁴ However, the Fifth Circuit overturned the Louisiana District Court's decision and allowed the law to go into effect.⁹⁵ All three districts' courts' decisions were guided by the tests in *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of New York*, 447 U.S. 557 (1980).

In *Central Hudson*, the Supreme Court provided a four-prong test to determine if commercial speech is protected under the First Amendment.⁹⁶ The test's first prong confirms that the speech does not concern an unlawful activity and is not misleading.⁹⁷ If the speech is determined to be either misleading or regarded as unlawful activity, the speech is not protected.⁹⁸ The second prong evaluates whether the government's interest is substantial.⁹⁹ The third prong considers whether the law advances that interest and the fourth prong determines whether the law's scope is broader than necessary to serve the interest.¹⁰⁰ If the government fails to meet the second through the fourth prong standard, commercial speech is protected.¹⁰¹

In the Fifth Circuit's reversal of the Louisiana district court's decision, the court found that speech was not protected because it failed to satisfy the *Central Hudson* test's first prong. Because the law only prohibited speech that would "intentionally misbrand or misrepresent"

⁹² *Id.*

⁹³ *Turtle Island Foods SPC v. Soman*, 632 F. Supp. 3d 909, (E.D. Ark. 2022); *Turtle Island Foods SPC v. Strain*, 594 F. Supp. 3d 692, 702 (M.D. La. 2022).

⁹⁴ *Id.*

⁹⁵ *Turtle Island Foods, S.P.C. v. Strain*, 65 F.4th 211, 220 (5th Cir. 2023).

⁹⁶ *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of New York*, 447 U.S. 557 (1980).

⁹⁷ *Id.* at 564.

⁹⁸ Kristin M. Sempeles, *The FDA's Attempt to Scare the Smoke Out of You: Has the FDA Gone Too Far with the Nine New Cigarette Warning Labels?*, 117 Penn St. L. Rev. 223, 237 (2012).

⁹⁹ *Cent. Hudson Gas*, 447 U.S. at 564.

¹⁰⁰ *Id.*

¹⁰¹ Sempeles, *supra* note 99, at 237.

meat,¹⁰² the law only prevented labels that would violate the first prong's misleading requirement.¹⁰³ In other words, a label that was not misleading would not be subject to violation of the law. Accordingly, the court reasoned that the law effectively paralleled First Amendment Protections.¹⁰⁴ The Fifth Circuit did not address whether consumers would be misled by meat-related labels on cultured meat packaging, which seemingly leaves open a future challenge against a manufacturer. The Court specifically noted in the conclusion of its opinion that “[n]othing in the statute's language requires the State to enforce its punitive provisions on a company that sells its products in a way that just so happens to confuse a consumer.”¹⁰⁵ This disclaimer nods to the idea that a state may still violate First Amendment protections by enforcing the statute when a producer lacks the intention to mislead a consumer.

First Amendment challenges to state labeling laws have also been heard in the Eleventh Circuit in *Ocheesee Creamery LLC v. Putnam*, 851 F.3d 1228 (11th Cir. 2017). The case considered whether Florida could prohibit a milk manufacturer who did not refortify their milk with vitamin A from labeling it “skim milk.”¹⁰⁶ Under the law, skim milk must be fortified with Vitamin A,¹⁰⁷ and the state gave the manufacturer either the option to sell the milk without using the name “skim milk” or face sanctions under the statute.¹⁰⁸ The court analyzed the challenge under the *Central Hudson* Test.¹⁰⁹ In reviewing the first prong, the Court found that the speech was related to both a lawful activity because the producers’ milk could be legally sold, but scrutinized whether the label “skim milk” would fail the misleading prong. On one hand, the

¹⁰² *Turtle Island Foods, S.P.C. v. Strain*, 65 F.4th 211, 220 (5th Cir. 2023).

¹⁰³ *Id.*

¹⁰⁴ *Id.* (“Thus, by the State's construction, the Act only applies to actually misleading representations that fall outside the First Amendment's protection for commercial free speech as defined by *Central Hudson*.”).

¹⁰⁵ *Id.* at 221.

¹⁰⁶ *Ocheesee Creamery LLC v. Putnam*, 851 F.3d 1228 (11th Cir. 2017).

¹⁰⁷ *Id.* at 1231.

¹⁰⁸ *Id.* 1237.

¹⁰⁹ *Id.* 1234.

court concluded that a state was free to propose a definition for a given term but stated that “it does not follow that once a state has done so, any use of the term inconsistent with the state's preferred definition is inherently misleading.”¹¹⁰ Failing to recognize the State’s definition, the Court relied on Webster's Third New International Dictionary in holding that the producer’s milk was within the parameters of the definition and was not inherently misleading, and therefore, the type of speech for which First Amendment protections apply.¹¹¹

The *Ocheesee Creamery* Court failed to address the second and third prongs because it found that the fourth prong was violated because Florida’s legislation was “clearly more extensive than necessary to achieve its goals.”¹¹² The Court concluded that the State had the option to allow the use of the label “Skim Milk” but to require an additional label informing consumers that it was not fortified with Vitamin A. Therefore, the Court vacated the summary judgment order of the district court.

In applying the first prong of *Central Hudson* to cultured beef, states do not contend that the sale of such a product is unlawful, leaving only the question of whether labeling it as “meat” is inherently misleading. Webster’s Dictionary defines meat as “animal tissue considered especially for food.”¹¹³ With the inclusion of a qualifier, such as “cultured meat” or “lab-grown meat,” and given *Ocheesee Creamery* determination that the government’s regulate as narrowly as possible to achieve its goal, it would be unlikely that a court would find the inclusion of meat terms in labeling of cultured meat to be inherently misleading.

¹¹⁰ *Id.* at 1238 (“It is undoubtedly true that a state can propose a definition for a given term. However, it does not follow that once a state has done so, any use of the term inconsistent with the state's preferred definition is inherently misleading”).

¹¹¹ *Id.* at 1239.

¹¹² *Id.* at 1240.

¹¹³ “Meat” Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/meat>. Accessed 19 Oct. 2023.

Under the second prong’s legitimate interest requirement, it would follow that a state has just as much interest in regulating the labeling of skim milk as it does in labeling meat. Similarly, under the third prong requiring that the regulation advance that substantial interest, states could argue that their labeling laws advanced a substantial interest in protecting consumers. However, considering the last prong, the state would have difficulty suggesting that their labeling bans were not broader than necessary to serve the interest. The states could have easily required a qualifier word such as “cell-cultured” or an equivalent, which would prevent consumer confusion between products created in a laboratory and those produced through traditional production.

Some states, such as Montana, have chosen to regulate labeling by requiring a qualifier to the label that “indicate[s] it is derived from those cells, tissues, blood, or components.”¹¹⁴ While speech prohibitions are determined under the *Central Hudson* test, the Supreme Court provided a separate standard for mandatory disclosures in *Zauderer v. Office of Disciplinary Counsel of Supreme Court*, 471 U.S. 626 (1985). The *Zauderer* standard has five prongs to determine whether a mandated disclosure violates First Amendment protections.¹¹⁵ The first prong of the *Zauderer* standard requires that the disclosure be purely factual.¹¹⁶ The second prong requires it to be uncontroversial.¹¹⁷ The third requires a legitimate government interest.¹¹⁸ The fourth prong requires that the disclosure be reasonably related, and the fifth requires the disclosure not to be unjustified or unduly burdensome.¹¹⁹

¹¹⁴ *Id.*

¹¹⁵ *Zauderer v. Office of Disciplinary Counsel of Supreme Court*, 471 U.S. 626, 105 S. Ct. 2265 (1985)

¹¹⁶ *Little*, supra note 109.

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

The *Zauderer* standard was utilized in the D.C. Circuit Court to validate a USDA regulation mandating a country-of-origin disclosure label.¹²⁰ The Court's analysis of *Zauderer*'s first prong concluded that a country-of-origin label was factual because it was "directly informative of intrinsic characteristics of the product."¹²¹ The Court similarly provided a modest analysis into *Zauderer*'s second prong and found that the disclosure was uncontroversial because disclosure was not "one-sided" or "incomplete."¹²²

The court's analysis of a legitimate governmental interest required a determination of the weight of burden that the disclosure places on the producer against the public's interest in the information. When considering this balance, the Court noted, "First Amendment interests implicated by disclosure requirements are substantially weaker than those at stake when speech is suppressed."¹²³ Factors considered in making this conclusion included the extensive tradition of country-of-origin disclosures, which allowed consumers to choose products domestically sourced, the value of that information to consumers, and the potential benefits in the event of a foodborne illness.¹²⁴ Finally, the court concluded that the government had met the relatively low burden of establishing that the mandated disclosure was rationally related to their interest and that it was not unduly burdensome.¹²⁵

Country-of-origin disclosure labels are comparable to a required disclosure that a product came from a laboratory. Both disclosures describe where a product originates from, and consumers strongly prefer they receive the information contained in those disclosures. Applying

¹²⁰ *Am. Meat Inst. v. U.S. Dep't of Agric.*, 760 F.3d 18 (D.C. Cir. 2014)

¹²¹ *Id.* at 27.

¹²² *Id.* at 27.

¹²³ *Id.* at 22.

¹²⁴ *Id.* at 23.

¹²⁵ *Id.* at 26 ("In other words, this particular method of achieving a government interest will almost always demonstrate a reasonable means-ends relationship, absent a showing that the disclosure is 'unduly burdensome' in a way that 'chill[s] protected commercial speech.'").

Zauderer’s first two prongs, a disclosure for cultured meat is “directly informative of intrinsic characteristics of the product” and “uncontroversial.”¹²⁶ While some may argue that the requirement to label is controversial, the focus is on whether the information provided is controversial.

Under the third prong’s legitimate interest requirement, a court must balance the producer’s burden in disclosing that the meat was cultured against the consumer’s interest. As exemplified by the court in *American Meat Institute*, consumers have traditionally enjoyed disclosures that inform them of a product’s origin, including whether it was grown in a laboratory.¹²⁷ Additionally, it is evident that consumers would place a high value on such a disclosure provided that one survey found as many as 38% of those surveyed would be unwilling to try cultured meat.¹²⁸ A second study investigating aversion to cultured meat found that 59% of consumers indicated that they would either “probably not like to” or “definitely not like to try.”¹²⁹ Given these factors, it would be likely that a court would ultimately find a legitimate state interest in mandating a cultured meat disclosure. Finally, the fourth and fifth prongs provide little barrier to a state’s regulation because, as noted in the *American Meat Institute*, such disclosures will almost always be rationally related to their interest and unlikely to be overly burdensome given the balancing performed under the third prong.

Ultimately, states that approach regulating cultured meat labeling by prohibiting meat-related terms face a much greater risk of invalidation under First Amendment challenges than

¹²⁶ *Id.* at 26.

¹²⁷ *Id.* at 25.

¹²⁸ Surveygoo, *Nearly one in three consumers willing to eat lab-grown meat, according to new research* (January, 2018) <https://www.datasmoothie.com/@surveygoo/nearly-one-in-three-consumers-willing-to-eat-lab-g/>.

¹²⁹ Keith Nunes, *Surveys highlight the hurdles facing cultivated meat manufacturers* (August 30 2022) <https://www.foodbusinessnews.net/articles/22125-surveys-highlight-the-hurdles-facing-cultivated-meat-manufacturers>.

states that require a disclosure of its origin. This is because the regulation prohibiting specific speech on labels requires a significantly greater showing of proof under the *Central Hudson* Test, which is used when states prohibit speech, than the burden required for the *Zauderer* standard, which is used when states require a disclosure.¹³⁰

4.2 Dormant Commerce Clause Challenges

Challenges to state labeling regulations have also been filed because they violate the dormant Commerce Clause. The dormant Commerce Clause provides that a state violates the Constitution's Commerce Clause if it implements a law that grows domestic commerce by burdening interstate commerce.¹³¹

While courts have traditionally approached dormant Commerce Clause questions utilizing a two-tiered approach, the Supreme Court recently held that States can enact laws that control commerce outside their territorial boundaries.¹³² The traditional approach to the dormant Commerce Clause first determines whether the law is facially discriminatory against out-of-state commerce and if so, finds that they are “virtually per se unconstitutional.”¹³³ When a law is not discriminatory but has a discriminatory effect, courts have traditionally relied on the standard set forth by the Supreme Court in *Pike v. Bruce Church, Inc.*, 397 U.S. 137 (1970). The *Pike* balancing test weighs a law's burden on interstate commerce against the law's local benefit.¹³⁴

The Supreme Court has significantly updated its precedent in its opinion for *Nat'l Pork Producers Council v. Ross*, 598 U.S. 356 (2023). The dormant Commerce Clause analysis in

¹³⁰ *Id.* at 23.

¹³¹ Brandon Denning, *National Pork Producers Council v. Ross: Extraterritoriality is Dead Long Live the Dormant Commerce Clause* (September 18, 2023) <https://www.cato.org/sites/cato.org/files/2023-09/cato-supreme-court-review-2.pdf>.

¹³² *Nat'l Pork Producers Council v. Ross*, 598 U.S. 356 (2023).

¹³³ *City of Philadelphia v. New Jersey*, 437 U.S. 617 (1978).

¹³⁴ *Pike v. Bruce Church, Inc.*, 397 U.S. 137 (1970).

National Pork Producer stands out because the plaintiffs conceded that the law was not facially discriminatory as the economic cost to in and out-of-state producers was equivalent. The plaintiff instead contended that the law was invalid under the doctrine of extraterritoriality because it had the effect of controlling out-of-state commerce.¹³⁵ The Court's 5-4 opinion, authored by Justice Gorsuch, held there was no per se rule prohibiting a state law from regulating in a way that controls out-of-state commerce, nor was there even a reason to conduct the *Pike* Balancing Test to assess the local benefit against the burden created.¹³⁶

“On the other hand, the law serves moral and health interests of some (disputable) magnitude for in-state residents. Some might reasonably find one set of concerns more compelling. Others might fairly disagree. How should we settle that dispute? The competing goods are incommensurable. Your guess is as good as ours. More accurately, your guess is better than ours.”¹³⁷

While the court's split leaves the question of how and when the *Pike* Balancing Test will be employed, it highlights that states are permitted, absent a discriminatory purpose, to regulate even if it impacts out-of-state commerce in a similar capacity.¹³⁸

National Pork Producers is informative when analyzing a dormant Commerce Clause challenge to state labeling laws for cultured meat because both address regulation that burdens in-state producers just as much as out-of-state producers. It also addresses regulation related to a state's ability to condition a meat product's entry into their marketplaces despite an economic burden created outside its border. Given the proximity of the two subjects, it could be logically inferred that a similar outcome would be reached if state labeling regulations impacted in-state producers to the same extent as out-of-state producers and the purpose of the laws was not premised on economic protectionism.

¹³⁵ *Nat'l Pork Producers Council v. Ross*, 598 U.S. 356 (2023).

¹³⁶ *Id.*

¹³⁷ *Id.* at 382.

¹³⁸ *Id.*

No state labeling laws impact in-state producers differently than out-of-state producers, but some states have more to gain than others concerning economic protectionism. Missouri, for example, has the third most extensive inventory of beef cattle, is second in the number of meat cattle operations, and received more than two billion dollars in cash receipts from their cattle sales.¹³⁹ Immediately after Missouri's passage of its meat labeling law, the Missouri Cattlemen's Association released a press statement applauding the law and affirming itself as a driving force in its passage.¹⁴⁰ Absent discriminatory intent, the dormant Commerce Clause does not provide a significant barrier to state regulation of consumer labeling.

4.2 Federal Preemption by the Federal Meat Inspection Act

While the dormant Commerce Clause determines how much states may impact interstate commerce without federal regulation, Congress may preempt state laws through federal legislation.¹⁴¹ This power is provided to Congress through the constitution's supremacy clause and occurs when Congress either states it expressly when it can be reasonably inferred from Congress' scheme of federal regulation that it left no room for states to regulate supplementally and when a federal interest is so dominant that the federal system will be assumed to preclude enforcement of state laws.¹⁴²

Congress expressly included two preemption clauses in the FMIA. The first prevents states from adopting legislation "in addition to, or different than" the FMIA regulations concerning the "premises, facilities and operations of any establishment."¹⁴³ The second

¹³⁹ Scott Brown et al., *Missouri's Value-Added Beef Study* (March 2016)

<https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/Beef/Docs/MoBeefValueAdded.pdf>.

¹⁴⁰ Missouri Cattlemen's Association, Press Release, *Fake Meat Labeling Law Takes Effect* (30 Aug 2018)

<https://www.mocattle.org/news-center/news-releases/news/details/9892/fake-meat-labeling-law-takes-effect>.

¹⁴¹ *Oneok, Inc. v. Learjet, Inc.*, 575 U.S. 373, 376 (2015).

¹⁴² *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 204 (1983).

¹⁴³ 21 U.S.C.A. § 678 (West).

preemption clause provides a specific preemption for “marking, labeling, packaging, and ingredient requirements” for any products regulated by the act.¹⁴⁴

Marking, labeling, packaging, or ingredient requirements in addition to, or different than, those made under this chapter may not be imposed by any State . . . but any State . . . may, consistent with the requirements under this chapter, exercise concurrent jurisdiction with the Secretary over articles required to be inspected under said subchapter I, for the purpose of preventing the distribution for human food purposes of any such articles which are adulterated or misbranded and are outside of such an establishment, or, in the case of imported articles which are not at such an establishment, after their entry into the United States.¹⁴⁵

Case law has developed around the second provision, which preempts state requirements around labeling.¹⁴⁶ Regarding cultured meat, the outcomes described below support that state regulation defining requirements for the term “meat” would be invalid by federal preemption.

In 1972, the Sixth Circuit heard *Armour & Co. v. Ball*, where the plaintiff sausage manufacturer challenged a Michigan statute regulating what meats could be included in sausage (prohibiting meat products such as hearts, stomachs, and spleens).¹⁴⁷ The court determined that the state law would be preempted if its “standard of identity” for sausage significantly varied from the definition contained in the Federal Meat Inspection Act.¹⁴⁸ The FMIA permitted up to 15% of poultry to be included in sausage, whereas the Michigan law would not allow a product to be labeled as sausage if it contained any poultry.¹⁴⁹ The state argued that the FMIA standard was a minimum requirement and that Michigan could adopt a stricter standard.¹⁵⁰ The court rejected this argument and held that the FMIA standard preempted the state standard as per the

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ Kathryn Bowen, The Poultry Products Inspection Act and California's Foie Gras Ban: An Analysis of the Canards Decision and Its Implications for California's Animal Agriculture Industry, 104 Cal. L. Rev. 1009 (August 2016); *Armour & Co. v. Ball*, 468 F.2d 76, 83-84 (6th Cir. 1972).

¹⁴⁸ *Armour & Co. v. Ball*, 468 F.2d 76, 83-84 (6th Cir. 1972).

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

second part of the preemption clause relating to misbranding and adulteration.¹⁵¹ Additionally, while the court noted that the preemption clause may allow states to regulate in some circumstances of misbranding and adulteration, standards of identity were a core function of the Federal Meat Inspection Act.¹⁵²

The Second Circuit reached the same determination in a challenge to a New York law requiring the word “imitation” be included on the packaging of alternative cheeses.¹⁵³ The court held that preemption occurs when a state law either regulates a field that Congress intended to occupy totally or when a direct conflict of state law occurs with federal law.¹⁵⁴ The court concluded that such conflict did exist because an alternative cheese that was nutritionally superior and labeled “imitation” would be misbranded under the FMIA.¹⁵⁵ Under the FMIA, the word “imitation” was only for products nutritionally inferior to those they model. For this reason, the court held that FMIA “permits some concurrent state enforcement but prohibits state ‘[m]arking, labeling, packaging, or ingredient requirements in addition to, or different than, those mandated by federal law.’”¹⁵⁶

The 9th Circuit considered the extent of a state’s “concurrent jurisdiction” as referenced in the PPIA’s preemption clause but concluded that including such language was merely meant to allow state enforcement of those federal regulations and not to permit additional ones.¹⁵⁷ The Court heard a challenge to a California law prohibiting the word “fresh” from being placed on

¹⁵¹ Kathryn Bowen, *The Poultry Products Inspection Act and California's Foie Gras Ban: An Analysis of the Canards Decision and Its Implications for California's Animal Agriculture Industry*, 104 Cal. L. Rev. 1009 (August 2016).

¹⁵² “Unwholesome, adulterated, or misbranded meat or meat food products impair the effective regulation of meat and meat food products in interstate or foreign commerce.” (21 U.S.C. § 602).

¹⁵³ *Grocery Mfrs. of Am., Inc. v. Gerace*, 755 F.2d 993, 997 (2d Cir.).

¹⁵⁴ *Id.* at 998.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 997.

¹⁵⁷ *Nat'l Broiler Council v. Voss*, 44 F.3d 740 (9th Cir. 1994).

meat products stored below 26 degrees.¹⁵⁸ The National Broiler Council, who contested the law, argued that the law created labeling regulations that were in addition to those prescribed in the PPIA and, therefore, invalid by preemption.¹⁵⁹ California argued that the preemption clause permitted them to have concurrent jurisdiction to regulate the limited scope of misbranding and mislabeling.¹⁶⁰ Relying on legislative history, the Court held the concurrent jurisdiction language “provision authorizes states to undertake, concurrently with the USDA, efforts to enforce federal requirement” and that “[i]t does not grant states the authority to enact their own additional requirements.”¹⁶¹

More recently, the 10th Circuit assessed federal preemption of state labeling laws when considering whether a meat producer whose label was approved by the USDA violated the New Mexico Unfair Practices Act because it was labeled “Product of the USA.”¹⁶² The label, while arguably deceptive, was approved by the USDA-FSIS because while the cattle were imported, they were slaughtered in the United States.¹⁶³ The court concluded that when the USDA-FSIS approves a label, they verify that it is not false or misleading.¹⁶⁴ Therefore, the court held that the plaintiff’s claims under the New Mexico Unfair Practices Act were an “attempt to establish a labeling requirement different than that imposed and approved by the USDA and the FSIS under federal law.”¹⁶⁵

The 9th Circuit considered federal preemption of state labeling laws in an appeal regarding an alleged violation of California's Consumers Legal Remedies Act, California's

¹⁵⁸ *Id.* at 743.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 746.

¹⁶¹ *Id.*

¹⁶² *Thornton v. Tyson Foods, Inc.*, 28 F.4th 1016, 1020 (10th Cir.).

¹⁶³ *Thornton v. Tyson Foods, Inc.*, 482 F. Supp. 3d 1147, 1152 (D.N.M. 2020).

¹⁶⁴ *Thornton v. Tyson Foods, Inc.*, 28 F.4th 1016, 1024 (10th Cir.)(Citing *Cohen v. ConAgra Brands, Inc.*, 16 F.4th 1283, 1288 (9th Cir. 2021)).

¹⁶⁵ *Id.* at. 1028.

Unfair Competition Law, and California's False Advertising Law. The Court considered a claim by the plaintiff that the defendant's poultry product was approximately 9% water, but the label indicated that it was less than 5%.¹⁶⁶ Notably, the PPIA contains identical preemption language, and therefore, preemption arguments under one act are supportive under the other.¹⁶⁷ Before the suit, Trader Joe's had submitted a "protocol" to the USDA-FSIS, which detailed the procedure they had installed to test their poultry's water retention, and the USDA-FSIS accepted this method.¹⁶⁸ The plaintiff in the matter conducted their own test of the poultry, which adopted a different testing procedure. While the Court failed to delve into specifics of the difference between the two testing procedures, they noted that the "federal regulatory scheme is permissive and allows a broad method of compliance, in that it allows the company to craft its own data collection process and make it available for FSIS review."¹⁶⁹ The court held that it was irrelevant as to whether the label was factually correct and found that the claim was preempted because it would have required Trader Joe's to adopt the plaintiff's water retention protocol, which was "in addition to or different than" the protocol which was federally approved under FMIA.¹⁷⁰ The case highlights that a state specific determination that a product is misbranded would be preempted by a contrary conclusion by the USDA-FSIS.

The thirteen states that have enacted legislation restricting the labeling of cultured meat products vary in their restrictiveness. Some prohibit meat-related terms on the label, while others require that a modifier term be included.¹⁷¹ Simultaneously, the USDA has clarified in an issued

¹⁶⁶ *Webb v. Trader Joe's Co.*, 999 F.3d 1196, 1199 (9th Cir. 2021).

¹⁶⁷ 21 U.S.C.A. § 467e (West).

¹⁶⁸ *Webb*, 999 F.3d at 1199.

¹⁶⁹ *Id.* at 1203.

¹⁷⁰ *Id.* at 1202.

¹⁷¹ Ala. Code § 2-17-10; Ark. Code Ann. § 2-1-301; O.C.G.A. § 26-2-152; Ky. Rev. Stat. § 217.035; La. Rev. Stat. § 3:4744(B)(11); Miss. Code Ann. § 75-35-15; MO. ANN. STAT. § 265.494 (West 2020); Mont. Code Ann. § 81-9-217; N.D. Cent. Code § 4.1-31-05.1; S.C. Code Ann. § 47-17-510 (2019); Tex. Health & Safety Code Ann. § 431.0805 (West); S.D. Codified Laws §§ 39-4-26; Wyo. Stat. Ann. § 35-7-119 (2019).

directive that all labels for cultured meat will be submitted to FSIS's inspection program for approval and has provided a definition of meat.¹⁷² While the USDA has not defined the future labeling rules it will enforce, it has indicated an intent to do so: "Under the requirements of FMIA and PPIA, all cell-cultured meat and poultry labeling must be preapproved by FSIS. At this time, FSIS does not intend to establish new food safety inspection regulations governing cell-cultured meat or poultry, given its current regulations are immediately applicable to such products."¹⁷³ With the current procedure outlined by the FSIS being to submit labels for their approval, state laws that effectively prohibit those labels would likely be preempted. For example, FSIS has approved at least one label for Upside Foods and permitted them to label their cultured meat as "cell-cultivated chicken."¹⁷⁴ This label would seemingly violate state laws prohibiting cultured meat from labeling their product as meat. This direct conflict, where a producer must use the label approved by FSIS but simultaneously cannot use that same label in compliance with state law, sets up the direct conflict upon which courts premise preemption arguments. Given that the USDA-FSIS has created an individualistic approach to labeling approval, the agency could opt to loosen or strengthen those labeling requirements as they see fit. Additionally, to the extent that labeling policies cause conflict with laws requiring a modifier term, the FMIA would seemingly preempt those laws as well. Case precedent of federal preemption of state labeling laws shows that Circuit Courts have been critical of state regulation

¹⁷² USDA, *Directive 7800.1* (June 21, 2023) <https://www.fsis.usda.gov/policy/fsis-directives/7800.1>.

¹⁷³ USDA, Human Food Made with Cultured Animal Cells (Accessed Dec 1, 2023) <https://www.fsis.usda.gov/inspection/compliance-guidance/labeling/labeling-policies/human-food-made-cultured-animal-cells#:~:text=Under%20the%20requirements%20of%20FMIA,immediately%20applicable%20to%20such%20products.>

¹⁷⁴ Lisa Benson & Joel Greene, Cong. Rsch. Serv., R47697, Cell-Cultivated Meat: An Overview (2023); Upside Foods, UPSIDE is approved for sale in the US! Here's what you need to know (June 21 2023) <https://upsidefoods.com/blog/upside-is-approved-for-sale-in-the-us-heres-what-you-need-to-know>; USDA approves 'cell-cultivated' chicken label (June 14, 2023) <https://www.fooddive.com/news/usda-cell-cultivated-chicken-label-upside-foods-eat-just/652975/>.

where they create requirements in addition to or different from those in the FMIA. For that reason, such regulations face significant challenges.

5. Conclusion

Consumer conception of cultured meat plays a significant role in its success as an innovative product, and that perception is influenced mainly by its labeling. While the labeling of cultured meat is guaranteed to be regulated at a federal level, its regulation at a state level remains in question. Challenges to state labeling laws have been filed in many states alleging violations of First Amendment protections, the dormant Commerce Clause, and preemption by the FMIA. Of these challenges, preemption by the FMIA and First Amendment challenges remain the strongest argument for invalidation, and challenges premised on the dormant Commerce Clause are weaker because a plaintiff would need to demonstrate that the state implemented the laws for economic protectionism purposes. States where a successful challenge is mounted will be regulated under the FMIA, which has indicated that they will allow for the term “meat” but will require a qualifying term as the USDA has already approved the labeling for at least one company under as “cell-cultivated chicken.”