

Cellular Meat is poised to be the next Big Thing in Alternative Protein



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A hot topic recently was the January announcement that Memphis Meats, one of the leading cell-based meat, poultry and seafood companies, raised a \$161 million series B financing round. Many company executives and investors have been asking me why a company without commercial revenue and still working to optimize its technology in a highly commoditized industry, was able to raise so much money at what is likely a very high valuation. It's not an unreasonable question, especially given the massive amounts of capital at high valuations raised during the past 15 years by other CleanTech companies (thin-film solar, EVs, energy storage), which ended up going bankrupt within a few years. However, I am optimistic that this time will be different as I believe the FoodTech sector has some significant advantages to other CleanTech end-markets.

To start with, the adoption of a low-cost product like food is likely to occur more rapidly in a business-to-consumer (B-to-C) industry, so that revenue generation is relatively quick. Sales of goods happen at a much slower pace in a more expensive B-to-C industry like automobiles and solar panel for homes, and even slower for B-to-B industries like agriculture, commercial and utility-scale solar & wind projects, large-scale energy storage devices and smart grid technologies.

Another key difference is that the renaissance happening in the food sector today is being driven by younger consumers (Millennials, Gen Z), who are demanding food that is healthier, locally grown, more environmentally sustainable, and tastier. These consumers are driving very rapid changes in the food & ag supply chain, with the consumer-packaged goods (CPG) industry facing particularly significant challenges. Additionally, a growing number of consumers are focusing on the ethical treatment of animals, driving an increasing number of people to become vegetarians and vegans.

As a result, the cellular meat industry has tremendous growth potential, and companies like Memphis Meats are poised to become household names, just as Beyond Meat and Impossible Foods have done during the past 18 months. Before that can happen, though, Memphis Meats and other emerging cellular meat companies must get their cost structures in line with other alternative protein companies as well as incumbent animal protein companies. Once they achieve this, cellular meat will provide advantages over plant-based options, particularly when it comes to taste and consistency, as it starts its process by using actual animal cells. However, cellular meat companies are still in the early stages of product development with costs that need to decrease significantly. It will take time for cellular meat

companies to hone their technology, just as it has taken a long time for the plant protein sector to shift from garden burgers and tofurkey to Beyond Meat and Impossible Foods.

Industry thought leaders that I have spoken to share the view that within two or three decades, we could be living in a world where a majority of, if not all, ground meat (beef, chicken, and pork) will be either cellular or plant-based, although steak and pork chops will likely still come from cows and hogs, but at much higher prices. I expect that Memphis Meats is just the first of many cellular meat companies that will raise significant amounts of capital in the coming years, funded by large and well-capitalized investors (in this case by SoftBank Group, Norwest Venture Partners, and Temasek), who all want to figure out a way to generate significant profits from the transformation of the global animal protein industry.