

Cultured meat: An effectual and advantageous alternative to conventional meat

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The increasing population demands the rise in the development of food technologies. As a result of advancement in the food sector through technology, food production has witnessed a rise. These imperative innovations are designed to enhance the world's food supply by attaining sustainability goals. One of the best examples is the emergence of cultured meat for the people who have the desire to eat meat and animal-derived foods. It involves the production of animal proteins using fewer animals and less animal-derived material than the current livestock industry. The process of producing cultured meat involves the isolation of myosatellite cells from mature animals. Myosatellite cells are also called one-way cells, which have the ability to replicate themselves into muscle cells. These cells are fed with nutrients and offered resistance (exercise) in the culture media to develop muscle cells. These cultured cells are moved to a bioreactor where they replicate rapidly and produce strings of muscle strips. Thousands of such muscle strips are required to form few grams of muscle meat that is sufficient for a patty in a burger or meat in chorizo taco. The source of nutrients for these cells is the serum that is obtained from animal blood but scientists are exploring plant-based nutrients to be economical. With cultured meat, a major amount of greenhouse gas emissions due to livestock rearing, slaughtering of meat for food, water usage, etc. could be reduced. This could even serve as space food for astronauts. Many start-ups in association with animal welfare and funding from superior companies are working on lab-grown meat that is economical to replace conventional meat. It holds great promises as an alternative to traditional meat but overcoming consumer resistance might enhance its production at the industrial level in the future.

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