

Lesson 2 The Future on Our Plates

Lab-Grown Meat

Host: Welcome to News Tonight. What was once the stuff of science fiction is finally arriving on our dinner plates. We're talking about lab-grown meat. You may be reluctant to try it. However strange it may seem, many people say it tastes just like regular meat, and it has big advantages for preventing animal suffering and reducing pollution. Today, we have tissue engineering expert Dr. Mike Perry with us to learn more about lab-grown meat. It's an honor to meet you, Dr. Perry. Can you tell our viewers what kind of research you are currently conducting?

Dr. Perry: Thank you for having me, Kelly. I am currently leading a lab-grown meat project research team. Our team is working to trace the process of cell division and growth in lab-grown meat, with the goal of discovering a cultivation environment that enables the creation of a better texture while burning less energy.

Host: I see. Now let's dive into our main topic, lab-grown meat. First, tell us what lab-grown meat is.

Dr. Perry: Lab-grown meat refers to meat grown from cells we keep alive in a controlled environment. It is different from conventional beef or chicken, which is produced by raising and slaughtering farm animals. It's also different from plant-based meat, which derives its protein solely from plants. It is often called cultured or cultivated meat, too.

Host: I'm sure many people are wondering about the reasons for developing lab-grown meat.

Dr. Perry: Every year, 80 billion animals are slaughtered for meat. The livestock industry uses 83% of the world's farming land and produces 60% of agricultural greenhouse gas emissions. Since lab-grown meat doesn't require killing animals, it reduces carbon emissions, and it retains the same nutrition and flavor as regular meat. This makes it an attractive substitute.

Host: I think it really could be an attractive alternative to the current options. How is lab-grown meat made?

Dr. Perry: The process of making lab-grown meat begins with the extraction of cells from a living animal's muscle or skin tissue. We then determine which cells can be multiplied to form delicious meat products. From there, we place the cells in a culture medium. This is a clean and controlled environment that offers the necessary nutrients for cells to replicate and mature by themselves. When the meat is ready, it is harvested and processed like a regular meat product.

Host: Does lab-grown meat taste like real meat?

Dr. Perry: Yes, indeed. Most of the original taste tests have yielded positive reviews. Many taste testers were unable to taste a difference between lab-grown and regular meat. Some of them even guessed incorrectly which sample was lab-grown.

Host: I see, but why do we need lab-grown meat when we already have plant-based meat?

Dr. Perry: Plant-based meat has come a long way, but some people still feel that it does not quite match the taste, texture, and overall eating experience of real animal meat. Lab-grown meat can provide people with a product that is biologically identical to real meat in a way that is much less harmful to the planet and animals.

Host: Very well. I think people interested in the idea of lab-grown meat will also wonder if it's safe.

Dr. Perry: Lab-grown chicken was first approved in Singapore in 2020, and more recently, the U.S. Food and Drug Administration and the U.S. Department of Agriculture have also approved the sale of lab-grown chicken. These facts demonstrate that lab-grown meat is probably safe. It's hoped that the safety of cultured meat will improve with the development of technology. Of course, as with all food products, we will need to collect more data over a long period of time to ensure its safety.

Host: I see. I heard some people are against lab-grown meat, even though it tastes like real meat and can reduce damage to animals and the environment.

Dr. Perry: Yes, that's correct. Two main issues are pointed out. First, there is criticism that growing meat in a lab requires a significant amount of energy, so it's not as environmentally friendly as lab-grown meat companies claim. Of course, traditional livestock farming emits significantly more greenhouse gases than the cultured meat industry does. Simplifying the production process and using renewable energy will address many of these concerns. There is also criticism that it won't eliminate animal cruelty 100%. This is because the process extracts cells from animals, although it doesn't kill them. Also, there have been continuing concerns about the cruelty associated with producing the culture medium. For honest animal welfare, these processes must be carried out ethically to minimize the suffering caused to animals. It is expected that technological advances will reduce these problems. For example, the cells can even be extracted from eggs or feathers of chickens, and some companies are replacing culture media made from animals with media made from plants.

Host: Plant-based meat is available in many stores and restaurants. When could we expect to see lab-grown meat on grocery store shelves?

Dr. Perry: Lab-grown meat has gotten much cheaper than it used to be, but it is still more expensive than conventional meat. This high price is an issue that needs to be resolved for the popularization of cultured meat. Several food companies have been working on finding less expensive production methods, so it won't be long before you can buy it in grocery stores.

Host: I see your point. Do you have any final comments for our viewers?

Dr. Perry: The idea of eating meat produced in a lab might seem gross to some people, but I believe we need to have an open mind for our future. It's an excellent alternative to producing meat in the traditional way.

Host: Dr. Perry, thank you for answering our questions about meat grown in labs. According to one survey, 80% of U.S. consumers report that they would be likely to try cultivated meat. Are you one of them? Thank you for watching. Good night.