

Would You Eat Lab-Grown Meat?

Scientists at the Medical University of South Carolina have been working towards meat that can be grown in the laboratory for the last decade. They have used a combination of bioengineering and tissue culture to create cultured meat and the project is funded in part by PETA (of course).

The FDA first approved the technique in 1995, so it is not exactly a 'new' concept. However it is only recently, that research is bearing serious fruit. In 2001, scientists in Amsterdam and the US were filing patents on varying processes to produce in-vitro meat (IVM). In 2008, PETA offered a \$1mil prize to the first company to bring lab-grown chicken meat to consumers by 2012. By 2009, Dutch researchers successfully cultured pork 'meat' - this project was funded by a national sausage maker and the Dutch government. It will still take a few years to perfect the technique and approve the product before it is marketed, but in the grand scheme of things; it won't be long.

According to the lead researcher, Dr. Vladimir Mironov who is a developmental biologist and tissue engineer, in the Carolina research, "If I got \$10 million, the answer may be in five or 10 years." Researchers have taken myoblasts-embryonic cells that develop into muscle tissue-from turkey and bathed them in a nutrient bath of bovine serum on a scaffold made of chitosan (a common polymer found in nature) to grow animal skeletal muscle tissue. The scientists in Holland used extracted cells from the muscle of a live pig, and added them to a mixture of other animal products in the lab. The cells multiplied and created muscle tissue.

At that time, in an interview with *The Sunday Times*, Professor Mark Post who led the research in Holland, explained, "What we have at the moment is rather like wasted muscle tissue. We need to find ways of improving it by training it and stretching it, but we will get there." Mironov also seconds this opinion by saying that, "We design exactly what you want. We can design texture." He says that he envisions football field-sized buildings filled with large bioreactors, to manufacture what he calls 'charlem'- 'Charleston engineered meat.'

There are obvious environmental and ethical benefits for engineered meat, however there is also a prominent 'ick' factor. The other factor is the obvious expenses of the experiment and execution. The third undeniable factor is the question of the future. It seems to me that instead of fixing the problem with our current food system and eating habits, instead of trying to reach towards a healthier ideal both environmentally and ethically, we are trying to by-pass the problem using grandiose research. Research that may or may not work and with consequences we still don't know of, just like the negative effects of GM wasn't known until it was too late.

The \$10 million dollars needed for this project could be put to better use by streamlining current farming techniques, doing away with CAFOs, promoting organic methods and improving education. FDA resources should be diverted by ceasing to approve pink slime and other atrocities of the food system.

So why is technology that is dubious being pushed? More, importantly, would you eat beaker bacon, petri pork or test tube tuna?

Name _____ Date _____

Lab Grown Meat

After reading the attached article, complete the following questions. I want original, well thought out answers. Not 2 word answers that you copied from your neighbor.

1. List 3 possible ADVANTAGES to creating meat in a laboratory setting.

a.

b.

c.

2. List 3 possible DISADVANTAGES to creating meat in a laboratory setting.

a.

b.

c.

3. Would you eat meat that was produced in a lab? Why or why not?

4. What do you feel is the biggest ADVANTAGE of creating meat in a laboratory? Why?

5. What do you feel is the biggest DISADVANTAGE of creating meat in a laboratory? Why?

6. Suppose you read this article in the Weimar Mercury and it excites you (good or bad) so much that you feel you have to respond with a letter to the editor. Write a rough draft of that letter here. (Remember you can be either in favor of this research or against it)