

Is the test-tube beef burger vegetarian?



It's a beef patty?.. the world's first lab-grown beef burger (below left) and after it has been fried (left). Tasters in London pronounced the patty as "close to meat" in flavour and texture but not as juicy.
 PHOTOS: © AFP

New patty delivers meat without slaughter, but it is still meat



nutrient solutions in petri dishes. They were then combined with elastic collagen in a culture dish. The cells grew into strips of muscles. Electric stimulation helped to contract the muscle strips and bulk them up. Approximately 20,000 such strips of beef were then combined with 200 pieces of lab-grown animal fat to mould them into a beef patty.

When it comes to what they cannot eat, vegans take a very simple stand. They eat only products of plant origin and none of animal origin. So even honey and milk are not part of a vegan diet. Now, vegetarians make

a more complicated choice. They regularly consume dairy products as well as honey – both of which are of animal origin. The vegetarian practices in Asia often originated from religious proscriptions and are followed by certain sects and communities and not necessarily all the followers of the religion. Only about a fifth of the Hindus in India are vegetarians. Likewise only certain Buddhists practise it. So do a minority of Israeli Jews and Seventh-Day Adventist Christians.

Most of the religious arguments are about

not killing and not causing pain and injury to animals.

The secular vegetarian arguments are broader. They fall under three common categories: 1) environmental, ecological, natural resource scarcity; 2) health issues including ingestion of antibiotics by humans (through meat diet which originated from those used in cattle feed) and 3) the inhuman conditions in which the animals are reared and slaughtered.

Recent research in the universities of Oxford and Amsterdam has shown that producing cultured meat "would require up to 99 per cent less land, 96 per cent less water, 45 per cent less energy, and produce up to 96 per cent less greenhouse gas emissions". According to Waterfootprint.org, "1kg of beef requires 15,000 litres of water". A report by the Union of Concerned Scientists showed that "nearly 60 per cent of the world's agricultural land is used for beef production, yet beef accounts for less than 2 per cent of the world's calories".

In absolute terms 30 million sq km of land is used to produce beef. They also show that "expansion of meat production, especially beef, has been a major driver of deforestation over the last 20 years". One can go on and on about the environmental impact and resource and energy inefficiency of the production of beef. But that is like flogging a dead cow.

Every few decades, scientific advancements not only push the frontiers of science but also make man revisit his existing ethical and even religious stands. That's what science is famous for. So, apart from opening

up the possibility of producing the animal protein in demand using over 95 per cent less land and water, it is showing a way to deliver meat without slaughter.

Obviously organisations like People for the Ethical Treatment of Animals (PETA) have quickly endorsed the cultured burger. To them it is like the Churchillian prediction, "We shall escape the absurdity of growing a whole chicken in order to eat the breast or wing, by growing these parts separately under a suitable medium" has come true.

So, let me rephrase the issue. Is it not true that not eating flesh defines a vegetarian? In other words, a vegetarian is one who has conquered the carnivorous streak in him.

Then the question changes to: Is this new burger patty made of flesh and would I eat flesh? That makes it queasier and puts me in a zone of discomfort. For the answer is that it was made from a dead cow's cell and tens of thousands of muscle strips were cultured in a nutrient solution made of foetal bovine serum. If my choice is simply not to eat flesh, it will be difficult to justify eating this burger, irrespective of whether it came from slaughtered or cultured meat.

For now, let the inventor Dr Mark Post have the last word on the debate. When asked, he said: "Vegetarians should remain vegetarian. That's even better for the environment."

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ALMOST 35 years after the birth of the world's first test-tube baby, we have the world's first test-tube beef burger. There were fears of Frankenstein babies and there are similar fears of Frankenstein meat. Just as the first proved baseless so far, I am sure we will not have to worry about the cul-

tured meat too. The dilemma I face is whether the "Google burger" or "Brin burger" (so named after Google co-founder Sergey Brin who funded the nearly \$500,000 project) can be a vegetarian burger.

First, how was this burger made?

Dutch scientist Dr Mark Post took tissues from cow muscle and extracted stem cells from them. These stem cells were grown in