START 026

## FOOD FOR EVERY TABLE

Israel has become an unlikely hotbed of alt-meat innovation, but rabbis are asking the question: can fake steak be kosher?



For a small country, Israel

has a disproportionately high number of alt-meat startups – more than 50, according to Nir Goldstein, managing director of the Good Food Institute Israel. "It's a hot market. We don't know of any alt-protein startup that hasn't been able to raise seed funding," says Goldstein. The Israeli government also funds two food-tech incubators, The Kitchen and Fresh Start.

Plant-based analogues dominate the scene:
Rilbite's minced-meat alternative is made from eight grains and vegetables, while More Foods' faux beef strips use a high-protein yeast blend "to create a novel taste and texture [that] resembles wholemuscle cuts," says founder Leonardo Marcovitz.

Some companies are also turning to 3D printing. Redefine Meat's Alt-Steak emulates the texture and structure of the real McCoy by digitally mapping over 70 parameters of beef, such as fat patterns; SavorEat's robot chef 3D-prints and cooks "burger" patties.

But on the other side of the kitchen is cell-based or cultured meat. It involves growing cell cultures taken from a live animal, so it's not vegan, but it is crueltyfree and vastly reduces the resources used to produce meat. "Once the cells are obtained, they are fed with nutrients that enable them to multiply within a fraction of the time required to grow conventional meat, and without antibiotics," says Didier Toubia, whose company Aleph Farms has developed a thin-cut beef steak (shown left) this way.

While innovation in this field is flourishing, many Jews in Israel and elsewhere might be wondering whether cell-based meats would be considered kosher. "At the moment, it's impossible [for the Jewish community] to reach a decision, as production methods have not been fully formulated or disclosed," says rabbi Joel Kenigsberg. "The critical question is the source of the cells: were they derived from a kosher species? And was the animal alive when the cells were taken, or had it undergone ritual slaughter? Now is the time to find production methods that meet kosher requirements."

But the rabbi recognises the benefits that cell-based meat can bring. "The broader question we always face is: should we embrace this new technology?" he asks. "If cell-based meat can live up to its promise of sustainably feeding the global population – of being good for both humanity and planet – then I think the answer will be a resounding yes." Delle Chan

ALEPH FARMS'
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BEEF STEAK IS
GROWN FROM
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COW CELLS

THE CELLS ARE
FED NUTRIENTS
AND MULTIPLY
INTO TISSUES
AS THEY WOULD
NATURALLY

IT TAKES JUST
3-4 WEEKS
TO "GROW" A
STEAK, VERSUS
2-3 YEARS
RAISING A COW