



60 million for animal-free dairy and meat

Organizations including WUR, Maastricht University and Delft University of Technology are to get 60 million euros from the government for cellular agriculture in the Netherlands, to be invested over the next eight years in education and research on the animal-free production of meat and dairy.

The focus will be on cultured meat and precision fermentation. In precision fermentation, the DNA code of an animal protein is inserted in the cell of a micro-organism, which then replicates that protein. The DNA is not taken directly from an animal cell; the code is reproduced synthetically and then inserted in a microbe such as a yeast. In this way, a yeast or bacterium can make milk proteins.

‘Precision fermentation is a form of modern biotechnology, but in the end it is still

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ordinary fermentation,’ says René Wijffels, professor of Bioprocess Engineering. ‘All the yeasts, bacte-

ria or moulds need are sugars as nutrition, and in the case of algae light too.’ A tenure track scientist and a PhD candidate will work on precision fermentation in Wijffels’ group, looking in particular at dairy proteins. Other PhD candidates at WUR will examine protein structures, food safety and socio-economic aspects such as consumer acceptance.

New Master’s

The universities are also developing three courses for a Master’s specialization in cellular agriculture. ‘If a lot of students register for the courses, it may become a separate Master’s programme,’ says the professor.

‘We expect to start the courses within the next two years. They will deal with cultured meat, precision fermentation and the societal aspects of these novel foods.’ ss