

Microbes also need to collaborate

Humans have used micro-organisms since time immemorial, for example for the production of beer and cheese. In biotechnology, this activity has been elevated to an art form. This often involves a single species of bacterium or fungus. Imagine the possibilities if different micro-organisms were to collaborate.

This is the main idea behind the WUR contribution to the new Centre for Living Technologies, a collaborative initiative by WUR, Eindhoven and Utrecht universities and Utrecht Medical Centre. Scientists from these institutes are joining forces to 'introduce new functions in living (multi) cellular systems'.

Unicellular

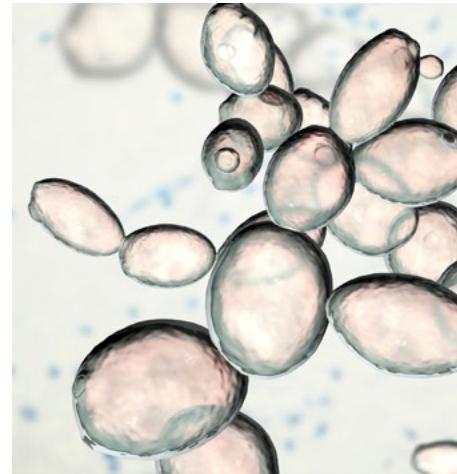
'All of the partners work with living cells,' Diana Machado de Sousa says. She represents WUR on the centre's board. 'Of course human cells are very different to microbes. Microbes are unicellular, while humans are multicellular. But microbes can act as a kind of multicellular organism when in microbial communities.'

Together they can do different things than when they are alone.' Machado de Sousa aims to steer this collaboration by encouraging teamwork in micro-organisms. 'The goal is to

'Together, microbes can do different things than when alone'

create added value by bringing the right microbes together, for example ones that exchange and use each other's metabolites. This is common in nature, but utilization of this concept to create controllable microbial catalysts is relatively new in biotechnology.'

The Centre for Living Technologies is part of a more extensive collaboration



This yeast microbe *Saccharomyces cerevisiae* is used to brew beer • Photo Shutterstock

between the four parties. This Knowledge Alliance was launched two years ago. The new centre has a budget of six million euros for four years. The first online workshop on synthetic microbe communities will take place on 17 March. RK