‘We want to understand microbes better’

The aim is to get a better understanding of microbes, and how they interact with each other and the environment. To achieve this, the Wageningen Microbiome Centre (WMC) is being set up, says Hauke Smidt, personal professor in Microbiology and one of the people behind the new centre.

There it was all of a sudden, two weeks ago: a plan for a brand-new initiative, including new building. But it was not as sudden as it looked, explains Smidt. ‘The idea started five years ago, when fellow initiator Thijs Ettema was appointed to the chair of Microbiology. Many different groups do microbiological research in Wageningen, both research groups at WUR and scientists at the Netherlands Institute of Ecology (NIOO-KNAW). The plan was to do something about that fragmentation and bring the researchers closer together.’

Do you need a new building for that?

‘Collaborating in a virtual centre is not so effective. There is also a shortage of space and we saw unique possibilities from creating a bricks-and-mortar centre.’

How big will the WMC be?

‘It will house various research groups from WUR, NIOO-KNAW and UNLOCK. UNLOCK is what is termed an infrastructure for studying microbial communities, which received funding in 2020 from the Dutch Research Council, WUR and Delft University of Technology. The new research building will house five chair groups in their entirety, two of the four UNLOCK sections and the Bioconversion group. In total, that is several hundred people. The Microbiology chair group alone has about 120 staff and thesis students. The other chair groups are Toxicology, Host-Microbe Interactomics, Bioprocess Engineering and Systems & Synthetic Biology. The building will be constructed on what is now the car park next to Axis.’

What is the added value of the new centre?

‘Microbiomes play a big role in domains such as the circular economy and circular agriculture, and when dealing with the consequences of climate change. There is also immense potential in microorganisms that cannot as yet be cultivated. If you want to use microbiomes to improve human and animal health, crop yields and the sustainability of processes, you have to understand how such microbial communities function. That requires above all fundamental knowledge of a kind that is largely lacking at the moment. We want to understand the systems better and develop feasible rules for managing them. The assumption is that the basic principles governing how microorganisms cooperate and communicate and/or compete with one another are universal.’

Artist’s impression of the new building

What are the next steps?

‘A think tank that involves all the participants in the WMC is now working on determining the lines of research. This is partly with a view to a possible future investment theme in WUR’s strategic plan. We are also working hard on the plans for the new research building. The Executive Board has given its approval and we already have a design. We are now in the property development phase. The plans are becoming more concrete. We also need to make sure the microbiologists who won’t be moving to the new building still remain involved in the developments.’ RK