

Specialised Microscopy Project

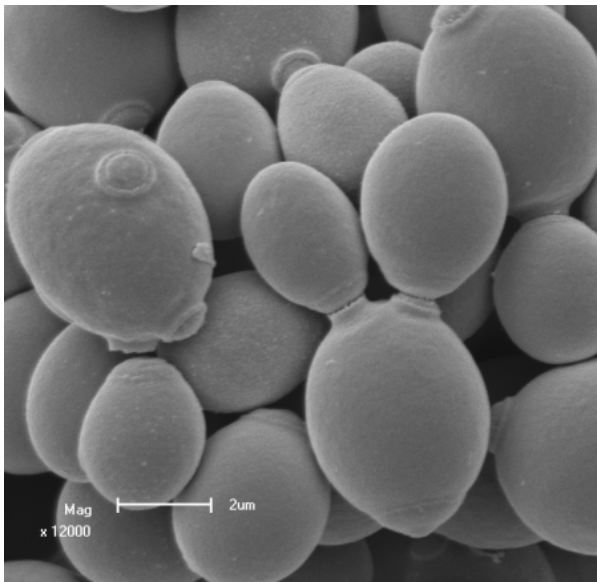
Ultrastructure and confocal fluorescence of yeast structures and spore development

This project is a South African National Research Foundation (NRF) supported and evaluated research project. The head of the project is Prof. J.L.F. Kock from the Department of Microbial- Biochemical and Food Biotechnology (Lipidbiotechnology Research Group).

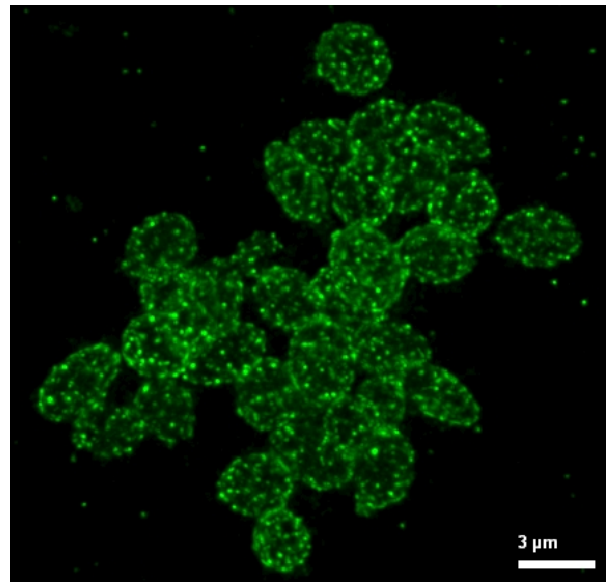
The aim of the microscopy part of the study is to determine the structure and shape of spores in the Ascomycete group known as the yeasts. Currently, many innovative concepts have been published about the development, release and movement of the spores (ascospores) of these yeasts. Scanning and transmission electron microscopes were used in the examination of these organisms. However, the most spectacular results were obtained using immunofluorescence (FITC) of oxylipins incorporated in the walls by examining the structures with a confocal scanning laser microscope (CSLM).

All the equipment are available at the Centre for Microscopy.

Below: Examples of electron- and confocal (fluorescence) microscopy.



Scanning electron microscope (SEM) image of yeast cells.



Confocal microscopy of yeast.