Bacterial Membrane Proteomics Laboratory
Supervision: Dr. Dirk-Jan Scheffers

Project for Master Students

Bacteria carefully regulate their shape by coordinating cell division and growth of the cell wall. These processes require the coordinated action of various proteins which are thought to be organised in large complexes. The molecular composition of these complexes however, is not known, and studies into the composition of these complexes are complicated by the fact that most of the proteins involved are embedded in the bacterial membrane.
In the Bacterial Membrane Proteomics laboratory we are interested in isolating complexes of membrane proteins involved in cell division and cell wall growth using native conditions. Additionally, we are interested in proteins that regulate formation of the cell division ring at the middle of the bacterial cell. In the master project a genetic screen will be performed to generate more insight into the interactions between cell division proteins in *Bacillus subtilis*. Cell division is one of the most important targets in the hunt for new antibiotics, and we hope to generate fundamental knowledge that will aid in this search.

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or look at our website: www.itqb.unl.pt/labs/bacterial-membrane-proteomics