

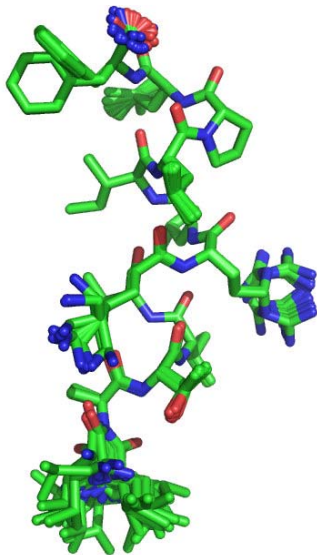
## AMP-Bacteria interactions studied by AFM-Fluorescence Microscopy

Vejleder: Peter Fojan/Leonid Gurevich

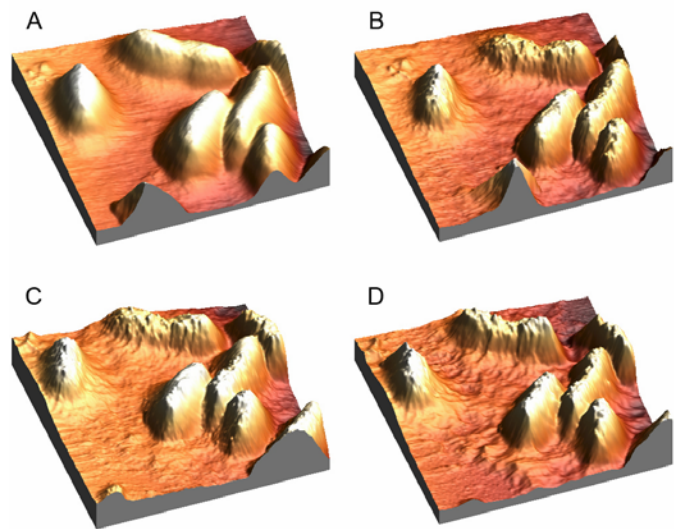
Antimicrobial Peptides are only known to inhibit or kill bacteria. About the ways how they do this, as many theories exist as there seems to be ways of killing the bacteria. As of today there is no systematic in the mode of action of the different groups of AMPs established.

This project aims at investigating the interaction of Crabrolin which belongs to the group of helical AMPs with different bacteria and yeasts. The choice of Crabrolin was made because we have solved the structure of Crabrolin with NMR spectroscopy and we know that the synthesis of Crabrolin produces 98% pure peptide. This makes Crabrolin an excellent model peptide because tedious purification steps can be omitted and the synthesis product can be used directly for the interaction studies. Furthermore the students will learn how to handle the new AFM which is combined with the fluorescence microscope and optimized for scanning of biological samples.

The combination of simultaneous acquisition of fluorescence images and topographic information of a sample will give new insights into the mode of action of the helical AMP Crabrolin.



Structure of Crabrolin



*E.coli* imaged in Liquid with Indolicidin