Students Project

(Bachelor-/Master thesis)

Automation in Microscopy

The 'scanR' image acquisition platform (Olympus) facilitates automatic microscopy of a cell population over time. In order to visualize changes in the cell metabolism with this system cells will be manipulated. Using a pump (Ismatec) a predefined amount of an activator or inhibitor will be transfected to the cell.

To guarantee the required coordination between the transfection of the modulator and the microscopy, a Python script has to be developed.

The aim of the project the programming of a software coordinated control of the pump in Python and the script based analysis of 12-well cell culture plates. Prospectively, also the control of a laser is intended in order to do a selective manipulation of expressed fluorescence proteins inside the cell.

Requirements:

Python programming skills

desirable: Interest in cell biology and microscopy