

Determination of the ratio of monomeric and trimeric copper transporter proteins in cell membranes using number and brightness analysis (Project at the International Nanotechnology Laboratory in Braga, Portugal)

Daniel Stähli, August 2018

This summer I have spent three wonderful months at the International Nanotechnology Laboratory (INL) in Braga, a town in the north of Portugal. The INL itself was founded 10 years ago and is well equipped with state of the art labs. Around 200 people work there. Mostly applied research is performed in close contact with the industry but there are also groups doing basic research. Biology, chemistry and physics labs specialized in nanotechnology are here under one roof. This proximity of different disciplines gives the INL a special atmosphere. Among others labs there include a huge clean room, a cell culture room, an optical microscopy room (confocal microscope), a biochemistry lab, labs for AFM and EM and many more. Additionally to these shared labs each group has their own lab. I worked in the group of Dr. Pieter De Beule and we investigated the formation of copper transporter proteins in membranes of living cells using number and brightness analysis. My project was in collaboration with the University of Minho which has a branch in Braga. This rather large university is right across the street. While I was working mostly on the microscopy and statistical part of the project my collaborators from the Uni Minho took care of cell cultures. During my stay I have learnt a lot about microscopy, statistics and programming (Matlab). Furthermore, I learnt how to plan experiments, organize things myself and acquire skills and knowledge independently and work in a multidisciplinary environment.

Braga is well connected via the Porto Airport (40 minutes by shuttle bus). The region has a rich culture and there is a lot to explore such as the towns Porto, Viana do Castelo and Guimarães. Living costs are low compared to Switzerland but at the same time the quality of life is high. There are many local, highly educated people especially from the Uni Minho. The INL community itself is international. During my time there I met many fascinating people.



The INL during the day. It is built on international ground. Unfortunately it is not allowed to take images inside.



São João, the largest festival in Braga. There is music, street food and traditional parades throughout the city. It is custom to hit each other (softly) on the head with plastic hammers.