

RESEARCH VISIT TO THE PROTEOBIO-LABORATORY AT THE
DEPARTMENT OF CHEMISTRY IN THE
CORK INSTITUTE OF TECHNOLOGY
CORK, IRELAND

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ProteoBio laboratory at the Cork Institute of Technology is specialised in the liquid chromatography-mass spectrometry detection of marine and fresh water toxins, as well toxins in food. They have recently obtained a price form the Irish Government (Higher Education Authority of Ireland) for the purchase of two new state-of-the-art mass spectrometry instruments, Thermo Orbitraps.

Our laboratory has similar research interests as the ProteoBio -laboratory, however, our work is mainly concentrated in the freshwater toxins microcystins and nodularins, produced toxic cyanobacteria. The purpose for my two months research visit was to familiarise myself with the laboratory's validation processes regarding liquid chromatography mass spectrometry analysis and to analyse my own samples with the new elegant instrumentation.

Unfortunately the installation of the new instrumentation was delayed and there were some technical problems with the other instruments in the laboratory as well. Therefore the instrument time was very limited, and the goals for the research visit were not reached. Instead of the Thermo Orbitraps I mainly worked with a new Thermo triple quadrupole instrument coupled to a high pressure Thermo Accela liquid chromatography system. The objective was to create a quantitative high speed and sensitivity method for our analytes.

During my visit I did learn about the validation process and from instrument troubleshooting, and this information will most definitely be useful in my research career later on.

Furthermore, Ireland has the most beautiful places in the whole world, and visiting Ireland is highly recommended to everyone!

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