

CBmed is a globally strong growing research company for biomarker research in medicine with its headquarter in Graz. CBmed links excellent research infrastructure, scientific expertise, medical knowledge, national and international industry partners for systematic medical biomarker research. Business language is English.

In line with the overarching vision of "Enabling applied precision medicine", CBmed will establish itself as a leading centre in cancer research.

We are seeking to recruit an ambitious, committed

Master Student (f/m/d)

Precision oncology aims to provide personalized drug treatment options by identifying, monitoring and targeting molecular aberrations of the individual patient tumor. In this regard, ex-vivo **drug screening systems** have the potential to improve clinical outcomes. We established a highly standardised automated drug screening system of patient derived tumor cells (PDCs) which allows to test a large panel of drugs for anti-cancer efficacy. Beside direct drug applications in solution, drug formulations, such as strategies for encapsulation/converting drugs into nano-drug delivery systems are an important field of research. In this master thesis we aim to investigate novel encapsulation approaches to improve drug efficacy as follows:

Tasks:

- Cell studies will be performed with labelled nanoparticles for visualization purpose (cellular uptake, uptake mechanism)
- An acoustic liquid handler using ultrasonic energy is used for a non-contact liquid transfer of compound solutions to cultured tumor cells and PDCs
- We will examine if manufactured nano-systems can be transported via this technology to the wells containing the PDCs
- Imaging with a high throughput microplate imager for high-content analysis will be used to investigate nano-system uptake into cancer cells

Prerequisites

- Good knowledge of molecular- and cell biology
- Strong interest in cancer research
- Experience in cell culture and imaging (preferred)
- Openness to work in an international team
- Strong sense of responsibility

Techniques you will learn

- Cell culture of cancer cell lines
- Advanced imaging using immunofluorescence
- Image analysis (CellProfiler, Harmony software)

We offer working on beyond state of the art technology with a reliable supervision on novel imaging and drug screening technologies.

We offer a paid master thesis with an limited contract in duration of 6 months with an monthly gross remuneration € 442,04.

Start date **01.06.2022 or earlier.**

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