



Medical University of Graz
Diagnostic & Research Center for
Molecular BioMedicine
Diagnostic & Research Institute of Human Genetics



Short-Term Traineeship Liquid Biopsy & Precision Medicine at the Institute for Human Genetics Diagnostic & Research Center for Molecular BioMedicine Medical University of Graz, AUSTRIA

Target Group:

We are looking for individuals in the following disciplines or related disciplines: current medical students, students of biotechnology, biochemistry or molecular biomedicine with laboratory experience for a 2-months internship (October-November 2021) funded through Erasmus+ (funding must be applied for at home institution). Medical students with little to no lab experience are still encouraged to apply!

About our research group:

At the D&F Institute of Human Genetics, we employ diverse strategies for the analysis of cell-free DNA (cfDNA), which in patients with cancer, contains *circulating tumor DNA (ctDNA)*. Obtained with a simple, non-invasive blood draw, ctDNA has enabled transformative approaches to the clinical care of *cancer patients* throughout the entire course of the disease, i.e. from initial diagnosis, to evaluation of response to therapy, to monitoring of minimal residual disease post-operation and to the identification of novel actionable targets. As such, ctDNA represents an analyte with significant relevance and potential at every step along the emerging precision oncology cascade. Our lab employs the latest *next-generation sequencing (NGS) technologies* to harvest this molecular information from tumors using plasma DNA.

Scope and Methods:

During this internship, you will have the opportunity to contribute to ongoing studies that we are conducting with breast, colorectal and prostate cancer patients. You will learn NGS methods that are used for genome-wide or targeted analysis of ctDNA. Since the amount of tumor-specific DNA in the blood can vary greatly, you will also perform pre-screening methods to estimate tumor content.

What we offer:

You will work in an *internationally recognized research group* with the option of completing a master's thesis/dissertation. Our team offers a friendly working environment with members who are committed to propelling the field of precision oncology forward. You will have the opportunity to observe how our ctDNA analyses are implemented in the clinic and how they drive the identification of novel biomarkers.

Our ideal candidate:

We first and foremost *select for character and then train for skill*. We are looking for an applicant who would like to learn the value of combining lab skills with clinical knowledge as it relates to liquid biopsy and NGS. The realization of precision oncology will require multidisciplinary approaches and an ideal candidate would like to be a part of this effort.

Application:

If you are interested, please send your CV including a letter of motivation explaining how you could envision contributing to our work until March 31, 2021 to lydia.tropper@medunigraz.at.