The Institute of Tissue Medicine and Pathology (ITMP) is an institution of the University of Bern, Switzerland with three major tasks: teaching, research and diagnostic service. In total, there are around 190 employees at the Institute. The ITMP provides an attractive setting to perform cutting-edge translational research in direct collaboration with pathologists and oncologists treating patients.

As of 1st September 2023 or by arrangement, the research group of Perren/Marinoni/Sadowski of the Division of Experimental Pathology is seeking a

**PhD student: Targeting drug-tolerant persister cells - an early offensive against acquired drug resistance in pancreatic neuroendocrine tumors**

The group’s research focuses on epigenetic and metabolic changes that underpin progression of indolent PanNET to aggressive, metastatic cancer. Treatment of aggressive PanNET is challenging due to the heterogeneity of this disease, the limited number of treatment options and the inevitable development of acquired drug resistance (ADR). ADR is estimated to account for 90% of cancer mortality and affects all types of therapies (chemo, targeted, immune and radiation). Targeting the early stages of ADR is a promising new strategy to extend the efficacy of existing therapies. Increasing evidence, including our own work (Tousignant et al, 2020; doi.org/10.1186/s40170-020-00217-6), shows that drug-tolerant persister (DTP) cells might play a critical role during the early phases of ADR.

Our group has an open PhD position for a project focusing on ADR in PanNET. The offered project will investigate the transcriptional and metabolic changes associated with the emergence and progression of DTPs under therapy stress in tumors and 2D and 3D cell culture models, including patient-derived tumoroids. The research will apply advanced molecular and phenotypic profiling methods, such as scRNAseq and high content fluorescent microscopy, to characterize PanNET DTPs at single-cell resolution. Ultimately, the aim is to find molecular targets for the development of co-treatment strategies that will delay or even prevent ADR in advanced 3D cell culture systems.

We are looking for an enthusiastic and motivated candidate with an academic degree in life sciences or biomedical sciences acceptable for matriculation at a Swiss University (Bologna compatible). The candidate should be proactive, have excellent communication skills and possess an aptitude to work in a team as well as independently. Good knowledge of English is required; German is helpful but not necessary. The ideal candidate has a strong background in 2D and 3D tissue culture models, cellular and molecular biology and is experienced in microscopy techniques (widefield, fluorescence, confocal). Prior expertise in automated image analysis, machine learning and Python is an advantage.
Our group offers a well-funded project in a young and dynamic environment. The project is supported by an experienced team of bioinformaticians, biologists, clinicians and state-of-the-art instrumentation. The successful applicant will be enrolled in the Graduate School for Cellular and Biomedical Sciences, University of Bern (www.gcb.unibe.ch). The salary will be according to the guidelines of the Swiss National Science Foundation (www.snf.ch).

Applications will be accepted until a suitable candidate is found. Please send your CV including a list of publications, a motivational letter with statement of your research interests, transcripts of University Diplomas with grades and two references (letters & contact information) as a single PDF-document by email to Ms Cornelia Mileto (cornelia.mileto@unibe.ch).

For further information, please contact Ms Cornelia Mileto (cornelia.mileto@unibe.ch).