

PhD Student Full-time position

TELEVIE Funded project

Tumor heterogeneity evaluation in pancreatic cancer and impact on molecular classification and therapeutic purpose

at the Laboratory of Experimental Gastroenterology (LGE) - Faculty of Medicine

Job description

LGE is a translational research laboratory aside and within the Gastroenterology, Hepatology and Digestive Oncology Department of Erasme hospital, ULB, Brussels. Our team, led by **Dr Jacques Devière** and **Dr Jean-Luc Van Laethem**, has long-standing expertise in the pathogenesis of pancreatic diseases, liver and inflammatory bowel diseases. The Ph.D. fellow would be emerged into a truly translational research team composed of lab technicians, molecular biologists, bioinformaticians and medical doctors, all working in a close interaction on a daily basis. This type of organization allows scientists to see their research findings directly translated into clinical needs.

Project description:

Pancreatic ductal adenocarcinoma (PDAC) is one of the most aggressive and lethal cancers, with a five-year survival rate below 8%. Inter- and intra-patient heterogeneity is a crucial problem that has led to many failures of clinical trials. Taking the approach of investigating gene expression landscapes of both, the tumor and the tumoral microenvironment, our team identified five molecular subtypes, with different clinical behaviors. However, this approach requires a sophisticated sequencing and bioinformatics analysis with a significant budget. For more routine clinical applications, it is wishful to develop a pragmatic way of molecular subtyping, i.e. by routine histopathological techniques using a set of surrogate markers for a specific subtype, integrating morphological and molecular characteristics of both epithelial and microenvironment components.

Project objectives

1. Develop a routine PDAC taxonomy using a pragmatic molecular classifier easily implementable into clinical routine
2. Addressing tumoral heterogeneity by studying subtype-specific gene alterations within different tumoral and stromal compartments
3. Explore molecular subtypes evolution and pathological changes upon different therapeutic interventions (chemotherapy/radiotherapy/ combined with immunotherapy or new agents)

The applicant will have the opportunity to work with a broad range of molecular biology and « omics » techniques applied to solid and liquid biopsies, cell-based assays, and protein analyses.

Profile

- ✓ Master in biomedical sciences
- ✓ Experience in molecular biology, immunohistochemical and biochemical techniques will be advantageous
- ✓ The candidate should be capable of both, working independently and collaboratively in a team
- ✓ Good organizational skills

Interested ?

Candidates should send curriculum vitae and a motivation letter to tatjana.arsenijevic@erasme.ulb.ac.be.

Additional information on the project can be obtained upon request.

Starting date: as soon as possible