The Laboratory of Tumor and Developmental Biology, **GIGA-Cancer**, at the University of Liège (Belgium) (PI: Professor Agnès NOEL) has an opening position, immediately available for a PhD candidate.

This project is part of a four years EOS (Excellence of Science) program starting on January 2022, which involves 6 academic teams from the Flemish, Walloon, and Brussels Capital Region, and a foreign expert who has pioneered the research on the pre-metastatic niche.

***Project summary:***

Many cancer types disseminate through the lymphatic system, where lymph nodes (LN) are the first metastatic relay before further spreading to distant organs. There is growing evidence that tumor-emanating signals create a premetastatic niche in sentinel LN that facilitate metastatic cell dissemination. However, the mechanistic underpinnings of how tumor cells induce a pre-metastatic niche in LNs and escape immunosurveillance upon seeding in the LN are less understood. The scope of the consortium is to gain unprecedented insights into the complexity and spatio-temporal evolution of the different LN compartments. The project will decipher tumor-emanating factors involved in the complex tumor-LN crosstalk and identify means to transform the LN environment into a “hostile soil” for cancer cells toprevent metastatic dissemination. The innovative goal is to provide a first holistic view of the spatial and temporal 4D map and detailed trajectory of the vascular, immune, and stromal changes in the LNsfrom homeostasis to the metastatic state through state-of-the-art approaches (4D intravital imaging, transcriptional, proteomic and metabolic profiling) using endogenous metastatic mouse tumor models and human LN samples of cancer patients.

Techniques

The project relies on a panel of in vivo and in vitro assays. It combines cellular, immunohistochemical, cellular and molecular biology techniques: immunohistochemistry, in vivo real time imaging, cell culture, single-cell RNA-Sequencing, proteomics, Western Blotting, RT-qPCR, cell signaling…

The ideal PhD candidate will be highly motivated and has a Master in Biomedical Sciences/Biology/Biochemistry.

Interested candidates should send their CV and application letter to Professor Agnès Noel (agnes.noel@uliege.be).