# Wanted: Post-doctoral fellow

Translational Research Unit (TRU) & Lunaphore Technologies SA

### Project:

**Investigation of Tumor Budding in Colorectal Cancer for Personalized Medicine**

Colorectal cancer is a heterogeneous disease with a tumor microenvironment rich in different cell types, densities and frequencies. Tumor budding at the advancing edge of the cancer has been described as an important prognostic and potentially predictive factor, with features of Epithelial Mesenchymal Transition (EMT), but the characterization of the environment in which it persists has yet to be elucidated. In this project, we investigate the tumor microenvironment of colorectal cancers, using novel microfluidic fluorescence multiplexing technology. In a partnership with Lunaphore Technologies SA (www.lunaphore.ch), we will establish panels of protein markers to characterize this environment and establish analysis pipelines for performing cell phenotyping, spatial analysis and other cellular neighborhood explorations. We aim to combine morphology and protein analysis to achieve a more in-depth phenotypic characterization and translate these into novel insights of colorectal cancer biology and potentially new prognostic biomarkers.

**Who are we?** We are looking for a Research Scientist to work in strict collaboration with the Application Development Team at Lunaphore Technologies SA. The candidate will be the main scientist involved in a 2-years project granted by the Innosuisse Impulse Program, aimed to resolve the Tumor Budding characterization in colorectal cancer settings. The project requires the use of existing Lunaphore technology on histological samples with the in-house developed microfluidic tools, with applications already defined or still under development. The candidate will join a hard-working team, passionate about taking tissue multiplexing and image analysis to the next level. The position will be mostly based in Tolochenaz (VD) at Lunaphore premises, with occasional travels to the academic partner site in Bern (5-10%).

**Required Qualifications:**

- PhD degree in Molecular Biology, Cancer Immunology, Biomedical Engineering, or a related field.
- Strong background in histopathology
- 1-2 years hands-on experience in performing immunoassay on tissue samples is a must.
- Experience developing / using machine learning algorithms and image analysis tools applied to histopathology images
- Excellent communication skills in English (written and spoken)

**Nice-to-have Qualifications:**

- Experience in microscopy and handling microfluidics devices is a strong plus.

- Good knowledge in in situ techniques, data analysis and image processing are a strong plus.

**Responsibility and Duties:**

- Be in charge of the scientific activities linked to the Innosuisse Project

- Develop and optimize new marker panels for TB characterization on histological samples using Lunaphore's microfluidic platforms.

- Explore and understand the background knowledge of the biomarkers under development.

- Image acquisition and processing, data analysis and reporting of results in a clear and detailed manner.

**Place of work**: Lunaphore Technologies SA, Tolochenaz (VD), with occasional travels to the academic partner site in Bern (5-10%)

**Duration of appointment**: 2 years

**Start**: September 2021

**Salary**: Competitive and according to the Swiss National Science Foundation

**What we can additionally offer:**

- An innovative project lying at the interface of an established academic milieu and a strong-growing high-tech company.

- A diverse and international working environment with a strong network.

- A highly interactive team with strong personal and technical qualities.

**Application:** Please send your application before **July 1st, 2021** including a short letter of interest, curriculum vitae with description of your professional experience, a list of publications, a list of 2 references, and copies of the certificates of academic qualifications as a single pdf-file by Email to: human.resources@lunaphore.com