

## **Open Position in Multiscale Immunolmaging Unit (mllu)**

### **Imaging Technologist - Improvement of the Imaging Mass Cytometry platform**

Humanitas Research Hospital (ICH, <http://www.humanitas-research.org/>) is a world-famous center of excellence for research and treatment of immune-related disease, from cancer to cardiovascular, autoimmune and neurological disorders. The Multiscale Immuno-Imaging Unit (mllu <https://www.humanitas-research.org/facility/advanced-optical-microscopy/>) provides access to imaging technologies for scientists and clinicians within and outside the Humanitas Research Hospital. The mllu is based on a multi-scale imaging approach, using a variety of technologies available in the facility, including widefield and confocal microscopy, STED-based super resolution microscopy, FLIM/FCS, multiphoton microscopy, in vivo bioluminescence/fluorescence imaging and tomography, chemical clarification of organs and 3D analysis, as well as Imaging Mass Cytometry (IMC). The personnel of the facility are in charge of the maintenance of the instrumentation and the development of new in vitro and in vivo imaging methods and protocols. In addition, the mllu has an independent research program aimed at investigating the role of innate immunity in several pathological conditions, including infection and cancer.

The suitable candidate will be involved in the activity and improvement of the Imaging Mass Cytometry (IMC) platform. IMC is an innovative imaging technique able to generate high-dimensional spatial data at subcellular resolution, overcoming the multiplexing limitation of traditional immunohistochemistry and immunofluorescence approaches. IMC takes advantage of metal-tagged antibodies to simultaneously stain, acquire and analyze up to 40 markers of interest in the same tissue section, without autofluorescence interference or spectral overlap.

Candidate's activities will include: 1) IMC service for INNOVA researchers 2) IMC acquisition for service/collaboration with both external and internal users; 3) Research activity aimed at investigating the composition of tumor microenvironment by IMC. The suitable candidate will take care of the experimental set up, the configuration of the antibody panels, the preparation of reagents and tissues, as well as staining protocol, image acquisition and data analysis.

The person filling this position will:

- Daily maintain the IMC instrument
- Provide support to users for the IMC experimental setup
- Provide reagent and sample preparation and acquisition service
- Provide data analysis and critical evaluation of the results
- Improve the IMC antibody panel, by testing new antibodies for the study of molecules involved in the composition of the tumor microenvironment

The candidate must have a PhD degree in biology, biochemistry, molecular biology, biotechnology, pharmacology or similar disciplines.

The candidate must have:

- Practical expertise in immunohistochemistry and immunofluorescence techniques (tissue preparation, use of microtome and cryostat, slide staining)
- Practical expertise in molecular biology techniques

The applicant should have:

- Background in optical imaging or imaging mass cytometry
- Knowledge of image analysis and dedicated software (ImageJ, CellProfiler, iLastik, etc).
- Excellent written and spoken English
- High level of motivation, initiative, flexibility
- Organized and reliably independent, attentive to detail, interested in acquiring new skills

**Location:** Humanitas Research Hospital, Humanitas University campus, via Rita Levi Montalcini, 20089, Rozzano, Milan, Italy

**Division:** Multiscale Immunolmaging Unit (mllu)

**Starting date:** October 2023.

**Duration:** three-year project contract.

**Status:** Regular Full Time.

For further information, please visit

<https://jobs.humanitas.it/job/Rozzano-Post-Doc-20089/775553902/>

or contact:

[andrea.doni@humanitasresearch.it](mailto:andrea.doni@humanitasresearch.it) or [imaging@humanitasresearch.it](mailto:imaging@humanitasresearch.it).

Interested individuals should send their CV, a statement of interest and their references from previous positions electronically to: [imaging@humanitasresearch.it](mailto:imaging@humanitasresearch.it).

*All candidate data collected from the application shall be processed in accordance with applicable law: Dlgs 198/2006 e dei Dlgs 215/2003 e 216/2003; privacy ex artt. 13 e 14 del Reg. UE 2016/679.*