

IN VIVO MULTIPHOTONIC IMAGING FACILITY: FROM CUSTOMIZED IMAGING TO DEDICATED QUANTIFICATION

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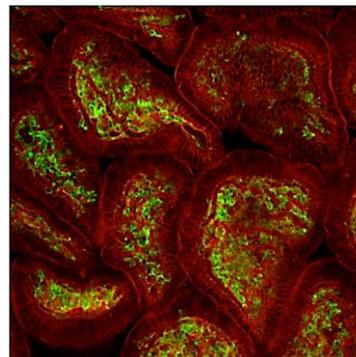
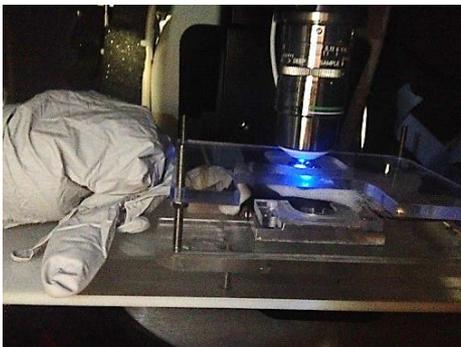
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The BioImaging Cell and Tissue core Facility of the Curie Institute (PICT-IBiSA) gathers highly sophisticated equipment and up-to-date technologies in advanced microscopy. The core facility “Nikon Imaging Center”, developed in partnership with Nikon France, is the first one to provide a wide access to intravital imaging in France, proposing a powerful and robust instrument for in vivo imaging with a dedicated support for animal management, surgery and image analysis.

Intravital imaging allows a better understanding of biological phenomena in the physiological condition/environment. Here, the full integration of our setup in a light microscopy facility allows a management based on a by-project submission and optimization of all the processes for longitudinal study. Indeed, in emphasis to the fundamental and translational research topics in the institute (such as tumor growth, developmental biology or immune cell movements), using our pluri-disciplinary expertise, we have developed specific tools, such as observation windows or holders, to improve in-depth imaging of various organs. Furthermore, in response to the needs in data analysis, we provide the most appropriate image processing and analysis tools using both existing and home-made softwares.

We will present relevant tools for intravital imaging, examples of applications from several biological projects and future instrumental developments. The BioImaging Cell and Tissue Core Facility, officially recognized by the IBiSA quality label for French national platforms, is a member of France BioImaging, the national research infrastructure for biological imaging, which in turn is the French node of the ESFRI project EuroBioImaging. This membership offers a national visibility allowing a better accessibility of the intravital imaging technology.



Intestine villi Tomato X CD11c-Cre WT
GFP – dendritic cells
Tomato – All cells (membrane)