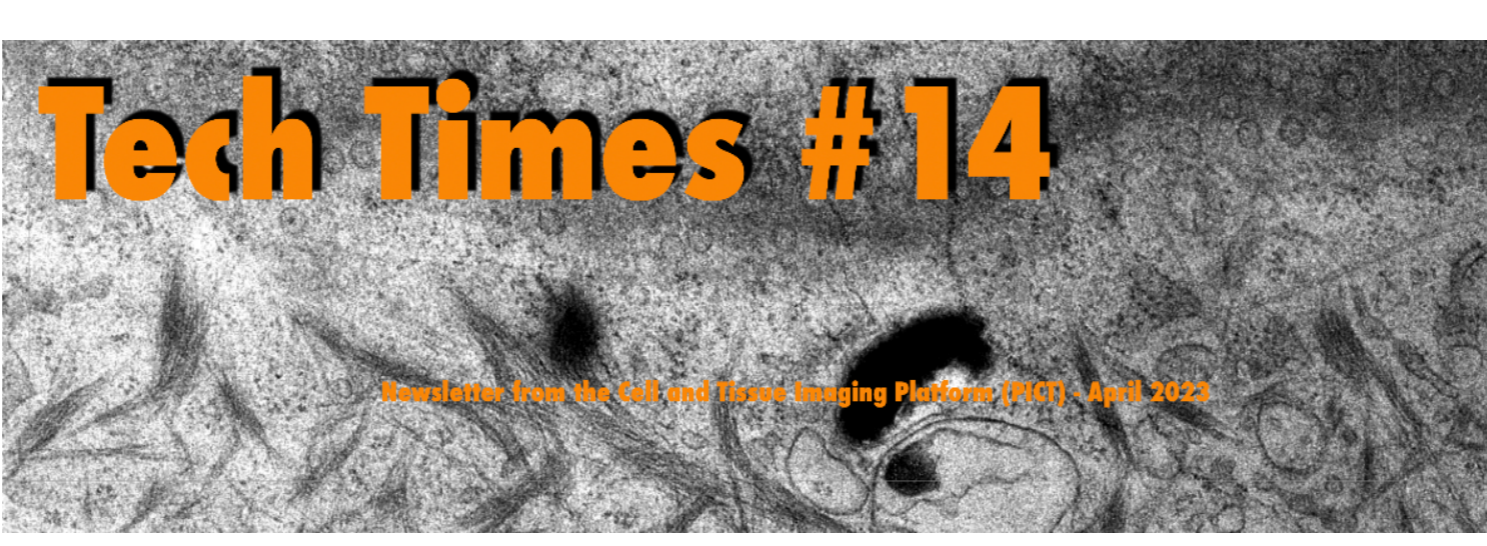


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Tech Times is your **newsletter** that regularly informs you about the latest updates on the PICT facility.


The **Cell and Tissue Imaging Platform (PICT)** welcomes you for your microscopy projects.

PICT is **IBiSA** certified and is a member of the **FranceBioImaging** infrastructure.

In short, the PICT platform brings together expertise in:

- Electron Microscopy
- Light-Microscopy
- High-content screening
- Image Analysis

More than **40** high-end microscopes and **18** experts in microscopy and image analysis are available.




New engineer at the Nikon Imaging Center: Since April 1st, 2023, **Matthieu Cortes** has taken up his position as a research engineer (Curie) to oversee the **Nikon Imaging Center** at the Curie Institute. Holder of a Cifre thesis in biology (2017-2021), Matthieu worked during his thesis on the "Development of a light sheet microscopy system to analyse microtubule dynamics in *Arabidopsis thaliana*" and then as an application engineer at Nikon Healthcare for one year in 2022.



The PICT platform is pleased to announce that we have obtained an ITMO Cancer funding from **Cancéropôle Ile-de-France** for the acquisition of a new generation Lattice Lightsheet microscope. The project was led by Y. Bellaïche and supported by 12 research teams from the Institut Curie, the ENS and the Collège-de-France.

Thanks to the co-funders : P. Leopold, Y. Bellaïche, J-L Maître, the Institut Curie, the Labex DEEP and CellnScale. Thanks to S. Katz and the SFP team for their help.



Welcome to Professor Juan Pablo Petiti

Juan Pablo is professor at Electron Microscopy Center (EMC), School of Medicine, National University of Córdoba and also researcher at CONICET, Argentina. He will spend 1 year at Raposo's laboratory in a cooperation project in order to understand the traffic of somatostatin receptors in pituitary tumor cells. In this sense, we must explore subcellular organization and locate proteins at a high resolution. Correlative light-electron microscopy (CLEM) is a powerful technique to carry this out, since we can combine the specificity and dynamics of fluorescence light microscopy with the high resolution and cellular context of electron microscopy. Thus, by using a precise and sensitive correlative FM and EM approach, we will attempt to determine the molecular regulation of SSTR trafficking, which may have possible positive implications for the therapy of pharmacologically resistant GH-secreting pituitary tumors. Certainly, the experience of working in one of the best world cell biology institutions will allow improve the acquisition of novel findings related to neuroendocrine tumors. The expertise that we will gain from this stay at Institut Curie applying cutting edge technology will be of great benefit to answer cell biological questions that have a direct impact on human health.

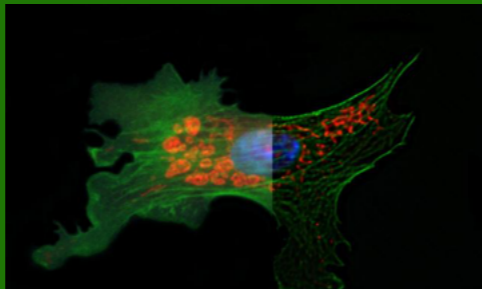





Image deconvolution - The deconvolution software **Deconv** is available via an online portal (Curie authentication) for researchers of the Institute. Please contact your PICT and MIC platform referents to be trained.



New Cryomicroscope at the Institut Curie :
Last February, the PICT Cryo-EM facility welcomed a brand new piece of equipment: the Glacios™ Cryo-TEM from Thermo Fisher. The microscope will be managed by D. Levy and A. Di Cicco.

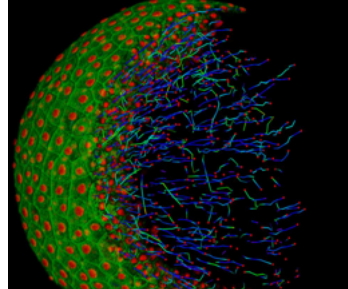


This powerful cryo-electron microscope, which cost more than 2 million euros, allows researchers to observe proteins with unprecedented resolution. A new way to understand their function and the modifications responsible for disease, including cancer.



TRAINING: The next basic FiJi training course (in English) organized by PICT in collaboration with the Institut Curie training unit will take place on 14-16 June 2023. Registration is not yet open (an email will be sent to vtlm for registration).

If you have a need for image analysis, do not hesitate to contact the platforms that will advise you.





PICT Scientific Retreat

From April 12 to 13, 2023, the PICT brainstormed in Deauville on various scientific, technological and organizational topics. An important time of exchange to discuss the future of the platform.




The commentary "[Acknowledging and citing core facilities](https://www.embopress.org/doi/full/10.15252/embr.202255734)" was published in the Science & Society section of EMBO reports. This is the result of discussion in the EU-LIFE Core Facilities Working Group and the effort of its members. It highlights the importance of recognizing the diversity of contributions to research and the key role of small scale research infrastructures in the production of scientific knowledge.

<https://www.embopress.org/doi/full/10.15252/embr.202255734>

Which light-microscopes are available on the platform?

It is easy, just go to our [website](#).






Bit depth of an image

Each pixel has an intensity value that can be plotted in a histogram. The range of intensity values is defined by the bit depth, often displayed as a grayscale image. Most microscopy images contain either 8-, 12-, or 16-bit pixels, where 8-bit pixels have $2^8 = 256$ and 16-bit pixels have $2^{16} = 65,538$ shades of gray ([Spring, 2013](#)). Bit depth is set at acquisition by the detector (camera or photomultiplier tube [PMT]), but can be altered postacquisition. As a general rule of thumb, increasing the bit depth of an image during postacquisition processing does not result in higher quality images. Therefore, it is imperative to set the desired bit depth during acquisition if quantitative imaging is a priority.

From [Mol Biol Cell, 2018, Jul 1;29\(13\):1519-1525](#).



You have just published an article with microscopy data... **Congratulations!** Don't forget to thank the PICT-IBiSA platform member of FranceBioImaging :


"We acknowledge the Cell and Tissue Imaging Platform (PICT-IBiSA), member of the national infrastructure France-BioImaging supported by the French National Research Agency (ANR-10-INBS-04)"










The Institut Curie is hosting the **Nikon Imaging Centre** since 2007. More [information here](#).

A big thank you to all the researchers, units, labex and institute that funds and/or **helps us to finance** the platform's equipment.

"We believe in sharing equipment".



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