ORGAPRED selects CYTOQUBE® from Hamamatsu Photonics for personalized oncology research and therapeutic discovery

Collaboration supports high-throughput 3D tumoroid drug screening

News provided by:
Hamamatsu Photonics France
April 08, 2026
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ORGAPRED, a France-based core facility specializing in Patient-Derived Tumor Organoid (PDTO) research, has selected the CYTOQUBE high-throughput 3D imaging system from Hamamatsu Photonics France to support personalized oncology drug screening and therapeutic discovery. The system enables rapid multi-color analysis of PDTOs and strengthens ORGAPRED's ability to evaluate treatment efficacy on these models.

On the left: CYTOQUBE system, on the right: conference room organized at the François-Baclesse Centre in Caen.
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Supporting personalized cancer treatment research and drug discovery

ORGAPRED is an innovative core facility dedicated to the production of PDTOs (also called tumoroids) to support personalized medicine and oncology research. Patient tumor samples are used to generate tumoroids, which are cultured for several weeks and distributed into 384-well

plates for drug testing. The CYTOQUBE system enables rapid 3D multi-color imaging to assess PDTO viability and cell death, providing a comprehensive evaluation of treatment response.

"*With CYTOQUBE, we can analyze tumoroids in three dimensions across entire plates, much faster than with conventional imaging approaches. This allows us to compare drug responses more efficiently, to support personalized oncology research, and to accelerate the identification of new effective therapeutic strategies*" Dr. Romane Florent, Research Engineer, ORGAPRED

A collaboration developed over time

The relationship between Hamamatsu Photonics France and ORGAPRED began in 2021 and progressed through scientific exchanges, conferences, and technical evaluations. In March 2025, an on-site system evaluation supported ORGAPRED's funding application and subsequent public tender process, which was awarded in December 2025.

The Hamamatsu x ORGAPRED team. From the left: DESMARTIN Guillaume, EMICA Bruno, KOSSAYER Ghenwa, LECOUFLET Lucie, FLORENT Romane, D'ANGELO Jean Marc, Divoux Jordane, WEISWALD Louis-Bastien, POULAIN Laurent, LE GOFF Jérémie. ©Hamamatsu Photonics

Demonstrated performance advantages

During evaluation, the CYTOQUBE system demonstrated intuitive operation, simplified protocol creation, automated tumoroid segmentation, and clear data visualization. The system performs a 3-color 3D analysis in less than 30 minutes, independent of plate format (96, 384, or 1536 wells).

By comparison, conventional confocal microscopy workflows may require more time due to multi z-stack acquisition.

About ORGAPRED

The ORGAPRED platform is dedicated to the production of Patient-Derived Tumor Organoid (also called tumoroids) for research and predicting response to treatment. It is a facility of the University of Caen Normandy hosted by the Comprehensive Cancer Center François Baclesse. The facility is open to any academic or industrial users wishing to use tumoroids available on ORGAPRED or to establish new tumoroid lines. For more information: Orgapred - home