



# ANICAN IMAGE PLATFORM

## VevoLAZR® (Fujifilm)

Ultrasound and photoacoustic imaging:

- Organ and tumor imaging (3D)
- Biology happens in real time
- Vascular flow (Doppler)
- Cardiac function
- Ultrasound guided injection
- Perfusion analysis
- $\mu$ bubble targeted
- Quantification of oxygen saturation
- Microdistribution of biomarkers
- Generating absorption spectra

## Quantum FX® (Perkin Elmer)

X-ray-based high resolution imaging modality

- Revolving arm (360°): acquire full 3D data
- Detector: convert absorbed X-rays into visible light photons
- Anatomical imaging: tissues, organs and whole organisms (bones, lung, vascularization...)
- Characterization of disease progression

## FMT®4000 (Perkin Elmer)

3D fluorescence tomographic imaging in infrared

- Quantification of deep tissue targets in vivo
- Using activated targets and/or vascular agents and labels
- Quantification of biological processes
- Immune and tumor cell localization
- Targeting membrane transport
- Biodistribution of treatment and antibodies
- Measurement of metabolic activity

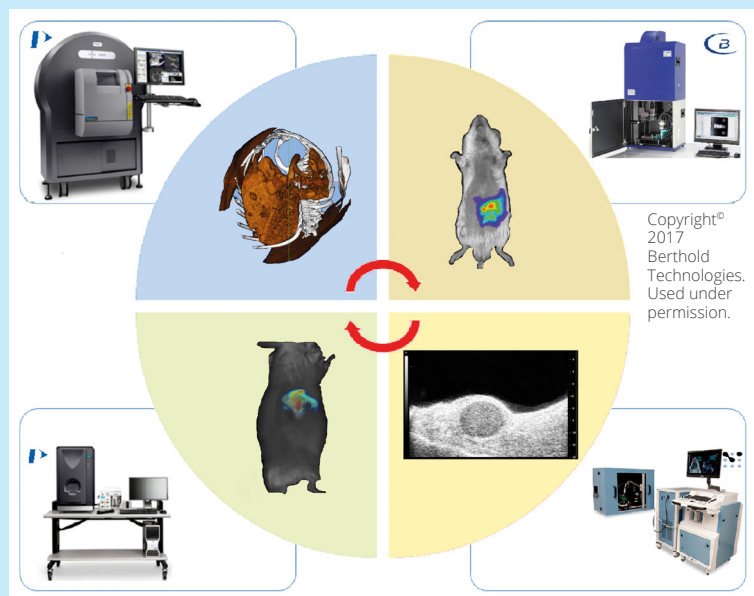
## Night OWL®

Bioluminescent imaging

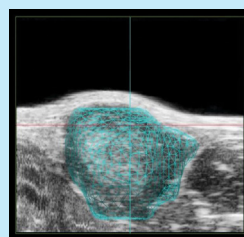
- Powerful approach using animals/cells with genetic modifications
- Luciferase reporter systems
- Tumor cells or bacteria location



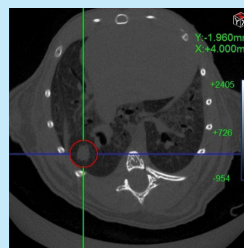
The imaging structure **AniCan Image** is located within the animal experimentation platform of the CRCL at the Centre Léon Bérard. It is **supported by the PhenoCan Investissement d'avenir**. Open to academic and industrial research, the aim is to propose **cutting-edge imaging tools essential for basic and pre-clinical research**, particularly in oncology.



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The Anican Image platform provides the **equipment, expertise and personnel** necessary for the technical and methodological support of any scientific project requiring the use of different in vivo imaging modalities in mice or rats.



The in vivo imaging provides **anatomical, functional and molecular images** over time and during tumor progression and therapeutic trials. The imaging modalities available within the platform are X-ray scanning, fluorescence, ultrasound (photoacoustic) and bioluminescence.

The platform is also involved in the development of new therapeutic strategies, while respecting the 3 Rs rule of ethics in animal experimentation (Reduce, Replace, Refine). This approach reduces the number of animals, avoids the regular sacrifice of large animal numbers in comparison with invasive approaches, and refines protocols.



## Access details

- Basic science projects
- Translational projects
- Preclinical projects
- Private projects
- SPF or SOPF mice, SPF rats
- Human, mouse or rat samples

## Advice for sample preparation

- Sanitary control is required for murine biologic samples (cell lines, serum, ascites, ...)
- Human cell lines free of mycoplasma contamination (test performed within 48h prior to experimentation)

## Material and methods section of your article

Animals were maintained in a specific pathogen free (SPF) animal facility AniCan at the Cancer Research Center of Lyon (CRCL), Lyon, France. All of the experiments were performed in accordance with animal welfare regulations for their use for scientific purposes governed by the European Directive 2010/63/EU. Protocols were validated by the local Animal Ethics Evaluation Committee (CECCAPP: C2EA-15) and authorized by the French Ministry of Education and Research.

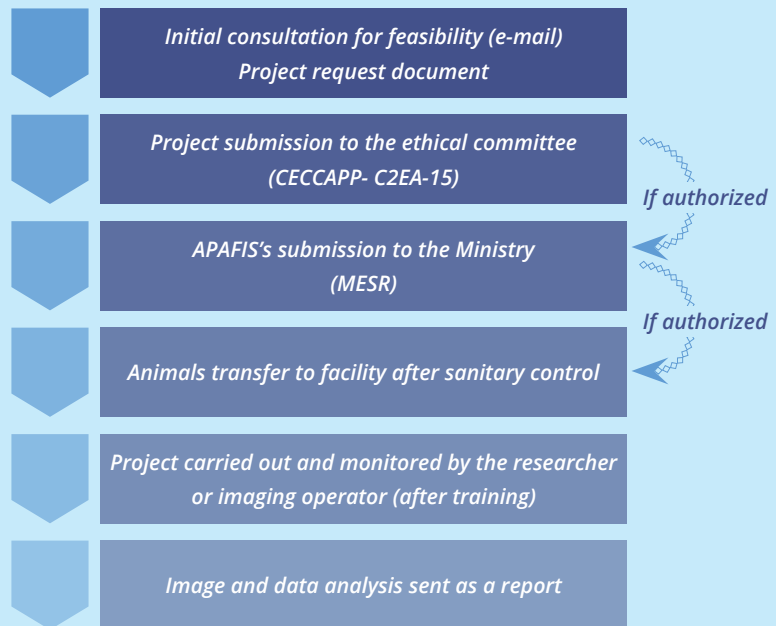
## Mention us in your publications!

To allow our platform to pursue its objectives, we need you to mention our work in your publications as follows  
**Thanks to PHENOCAN (Investissements d'avenir) for imaging devices (ANR -11-EQPX-0035 PHENOCAN)**

## Contacts

**PLATFORM OPERATOR**  
 anican@lyon.unicancer.fr

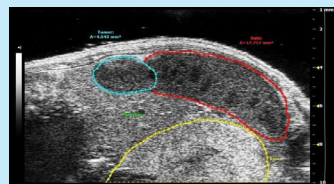
## Project workflow



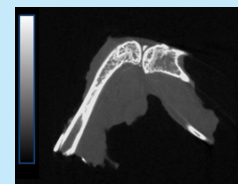
## D.I.Y.?

The AniCan Image platform is accessible to researchers with a C or A degree in animal experimentation. To use the imaging devices, the user must be trained by an experienced imaging operator.

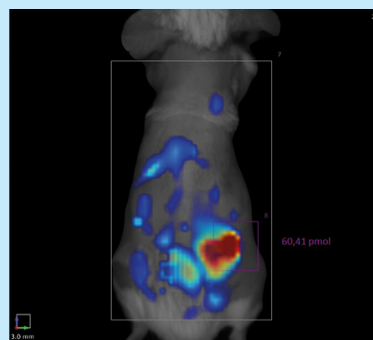
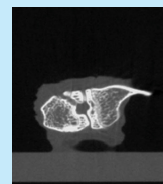
## Application examples



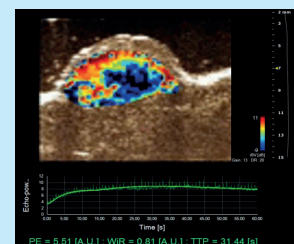
Location of the pancreas, the tumor and the surrounding organs (VevoLAZR®)



Observation of femur and trabecular bone (Quantum FX®)



Test of new fluorescent agents to detect inflammation in mammary tumor with Macro750 (FMT®4000)



Blood perfusion studies in vivo (VevoLAZR®)

Submission form and more infos:  
[www.cancer-research-lyon.com](http://www.cancer-research-lyon.com)