

XENOPAT

Mice orthotopic implantation for human tumors

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XENOPAT is a spin-off of the Catalan Institute of Oncology (ICO), the Bellvitge Biomedical Research Institute (IDIBELL) and the Bellvitge University Hospital (HUB).

HIGHLIGHTS

- ✓ Personalized oncologic mice models for preclinical studies (Orthoxenograft®)
- ✓ In-House tumor bank (OrthoXenoBank®) for orthotropic mice tumor models

TECH STATUS

- ✓ **TRL: Market Service**
- ✓ **IP: Know How & Trademark**

Background

XENOPAT provides services focused on assisting anticancer drug development and personalized oncologic treatment.

XENOPAT achieves its goals by means of orthoxenografts®, mouse models in which a small piece of human tumor (xenograft) is implanted in the same organ of origin (orthotopically).

Alberto Villanueva PhD, cofounder of XENOPAT, has been developing the orthoxenograft® technology for the last 10 years, being internationally renown by his work. Moreover, he has been a key collaborator of several pharmaceutical companies providing them orthoxenografts® to perform the advanced preclinical development of their new anticancer molecules.

Technology

Orthoxenografts® are characterized by:

- Maintaining the histological, genetic and molecular characteristics of the original primary human tumor.
- Reproducing growth and dissemination patterns of the original tumor.
- Mimicking the drug response pattern of the original primary human tumor.

- Achieving the maximum correlation between *in vivo* preclinical studies and human clinical trials.

XENOPAT possesses exclusive rights not only to generate new orthoxenografts® based on clients needs, but also to exploit the OrthoXenoBank®, a collection of orthoxenografts® composed by more than 200 models, which represent the most frequent histological subtypes of the following locations: colon, breast, lung, ovarian, pancreas, endometrial, sarcomes, head and neck, liver, germ cell, among others. All the tumors present at the OrthoXenoBank® are classified according to histological subtypes and characterized at genetic level for the most relevant mutations described in each tumor subtype.

Contact Information:

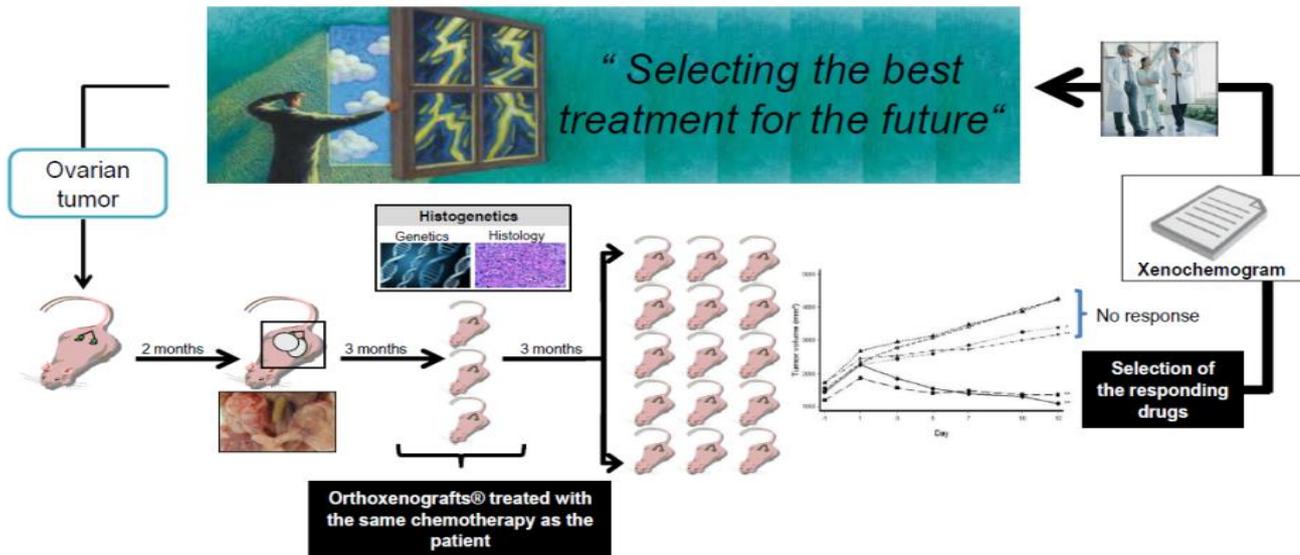
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IDIBELL Technology Portfolio



Applications

XENOPAT offers to main type of applications:

-Advanced Preclinical services.- XENOPAT offers researchers and pharmacological companies the possibility to generate orthoxenografts® and also to use the OrthoXenoBank®. Using these models, oncologic drug development acquires a new and powerful tool to guide its success through the development pipeline.

- Personalized Oncologic Treatment services: XENOPAT offers healthcare professionals and oncologic patients the most advanced technology in order to select the best treatment in the fight against cancer. XENOPAT aims to be a key decision tool in the oncologic personalized treatments.

Technology status

The technology has been under development for the last 10 years and thus the technology is fully established. Several proofs of concept of its use have been published in high impact peer reviewed journals.

Market opportunities

XENOPAT is not the first company to offer Patient-Derived Xenografts (PDXs) as an advanced preclinical service. Champions Oncology and Xentech are

companies offering similar services. However, it is important to point out that most of the services offered by those companies are based on subcutaneous PDX. The use of orthotopic PDXs is a key feature of XENOPAT services since it is the best approach to replicate tumor microenvironment and orthoxenografts® in human tumors.

Business Opportunity

Sadly, 14.1 million adults in the world were diagnosed with cancer in 2012 and there were 8.2 million deaths from cancer in the world the same year. Thus, new ways to fight against cancer need to be settled. Personalized medicine is becoming an issue as more is known about cancer biology. Thus, XENOPAT team believes to be placed in a great position to succeed.

XENOPAT is a small spin-off with infinite chances to grow. XENOPAT team needs to: incorporate new personnel, establish its own R+D activities, build its facilities, and become renowned around the world. The Business Opportunity is there and XENOPAT is open to discuss several potential ways of cooperation and investment.

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