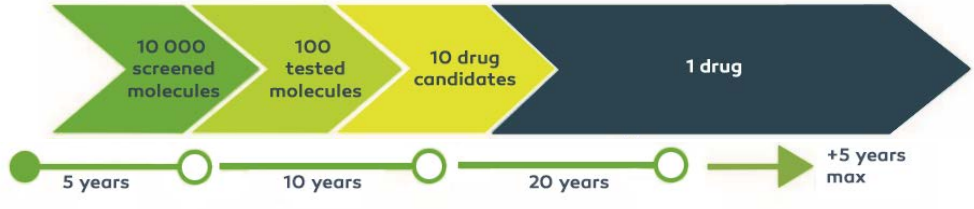
CTIPharma

3D Bioprinted tumors for therapeutic innovation

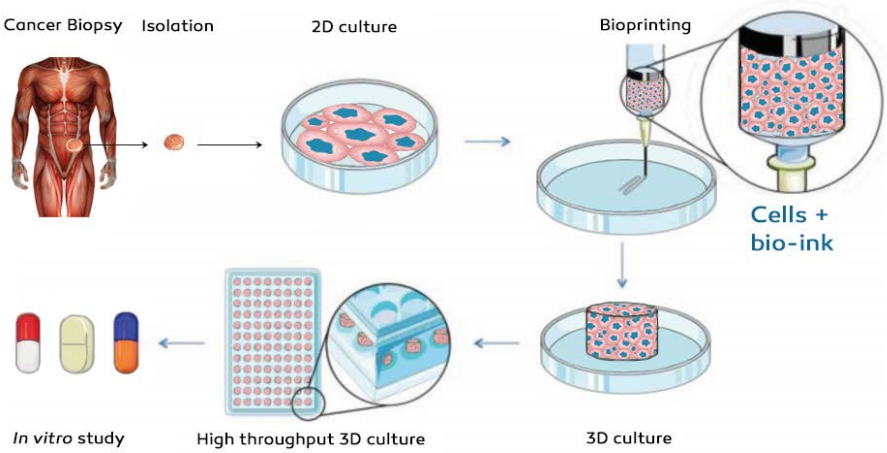
95% of new drug candidates fail cancer clinical trials, costing billions to the pharmaceutical industry and delaying new treatments for patients. Robust predictive human cell bioassays support faster development of pre-clinical trials, thereby saving time and money.



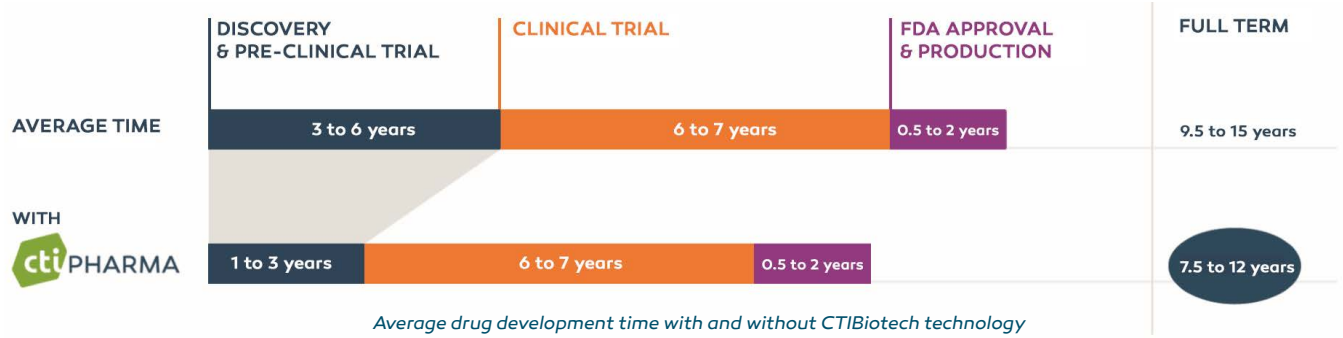
Development pipeline of a drug candidate : from the idea to the product

CTIBiotumors for predictive and personalized medicine

By combining excellence in cancer research, tissue engineering and 3D printing, CTIBiotech has developed the building blocks to produce large-scale, reliable, robust, reproducible, predictive, personalized 3D biological models of human tumors in sufficient quantity to accelerate the development of drug candidates for cancer chemotherapy and immunotherapy.



Schematic representation of the development and production of the CTIBiotumors models.



Average drug development time with and without CTIBiotech technology

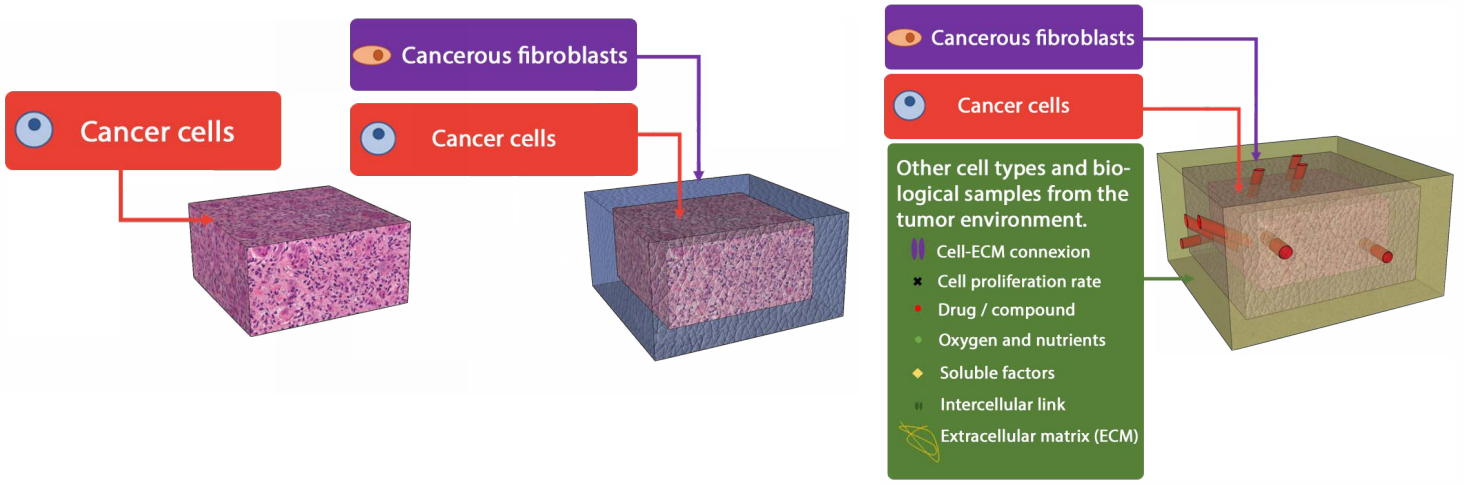
T +33 9 67 10 74 55
office@ctibiotech.com

Bat A16, 5 avenue Lionel Terray
69330 Meyzieu, Lyon, France

ctibiotech.com

CTIPharma

CTI 3D Biotumor : a complex model



Standard CTIBiotumor

This model contains a cancer cell type and associated bio-ink. It allows the development of new treatments against cancer cells in a 3D environment.

Complex CTIBiotumor

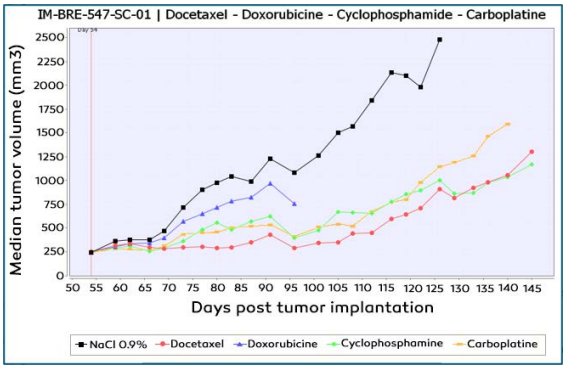
This model uses two cartridges, one containing a type of cancer cell and the other containing tumour fibroblasts. It allows the development of new treatments against cancer cells and other tumour-forming cells.

Advanced CTIBiotumor

Printed with 3 cartridges containing cancer cells, tumor fibroblasts and endothelial/blood vessel and/or immune cells. This model allows the development of new combined therapies against all aspects of the tumor.

Comparison of the Docetaxel response on CTI 3D Biotumor and on standard mouse model of breast cancer

Result on standard mouse model (IM-BRE-547)



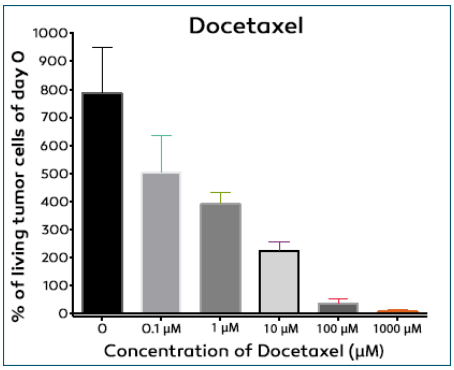
This graph shows the effect of some anti-cancer molecules on the development in-vivo of breast tumors on IN-BRE-547 mouse model during 145 days. The IM-BRE-547 is a mouse model used to study the development of breast cancer.

We show a dose dependant effect.

We are able to correlate the results of the 3D model with the mouse standard model.

Other chemotherapies are currently tested on our 3D models.

Result on CTI 3D bioprinted model



This graph shows the effect of different doses of docetaxel on the viability of 3D printed breast cancer cells. Docetaxel is indicated for the treatment of locally advanced or metastatic breast cancer.

Key points

- To create 3D biological structures made of human cells that provide access to more reliable and less expensive tests that allow better assessment of the safety and efficacy of drug candidates.
- Reduce the time required for the pre-clinical evaluation phase.
- Reduce the costs in the drug development chain by 20%, (=saving of € 520 million per drug developed).

BIOTECH VISIONARY SCIENCE

T +33 9 67 10 74 55
office@ctibiotech.com

Bat A16, 5 avenue Lionel Terray
69330 Meyzieu, Lyon, France

ctibiotech.com