MEDICAL DEVICES

Matrices for *in vitro* tumor tissues allow to test antineoplastic drugs and protocols

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What's needed for?

Disclosed is a 3D matrices for in vitro growth of tumor tissues.

Need to prune the system variables using faster and cheaper in vitro assays in order to design the in vivo experimentation on a smaller number of animals, obtaining the following advantages:

1. Speeding up the arrival to the clinical trial
2. Avoiding the sacrifice of animals with ethical and economic advantages.

Recreating a good model of tumor tissue in vitro allows you to experiment with new formulation anti-neoplastic drugs, to develop the optimal conditions of electroporation as well as the study of the cellular mechanisms underlying the disease

Advantages

- Scaffold that allows to obtain tumor cell growth and cell produced extracellular matrix: the in vitro tissue is extremely similar to the tumor tissue obtained from biopsies (breast cancer)
- The cells in the 3d matrix experience cell-cell and cell-matrix interactions as in biological tissues, unlike 2d cultures.

Applications

- Evaluation of the effectiveness of anti-neoplastic drugs
- Development of reversible or non-reversible electroporation conditions
- Study of the cellular mechanisms that allow the development of tumors

TRL scale

1 2 3 4 5 6 7 8 9

Health and biomedical - Medical Devices