



Therapy

Stem cells activated for cancer treatment

Use of stem cells activated by low doses of radiation for the treatment of locally advanced tumors and cancer systemically.



Description

A research group of Andalusian Public Health System has developed a new composition for the treatment of cancer by joining mesenchymal cells activated with radiation and a radiotherapeutic agent, as a source of cytokines and co-administration with radiotherapy and inhibitors of PARP increasing levels of cytokines released in breast tumor, thus increasing the effectiveness of radiotherapy through potentiation of cell death by bystander effect of short and long range.



Advantages

The in vitro results obtained show that:

1. It is possible to increase the potential for tumor cell killing using a combination of medium conditioned by the irradiation of mesenchymal cells and pharmacologically substances act as inhibitors of PARP-1 enzyme, which can be applied simultaneously or successively on the model tumor.
2. The use of activated mesenchymal cells (AMC*) potentiates the action of radiation applied to the treatment of human cancer models. Furthermore, based on these results shown that administration of mesenchymal cells and radiation together with PARP inhibitors could lead to an increase in the efficacy of radiotherapy.



Intellectual Property

This technology is protected by patent.



Aims

This research group is looking to establish a licensing agreement or an agreement of public-private partnerships for technology development.



Classification

Area: Therapy
Technology: Stem Cells
Pathology: Cancer