

Nanomedicines for local and intracellular gastrointestinal tumour modulation

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Our group is focused on the development of drug delivery systems, with special attention on nanotechnology, and their application to the pharmaceutical and biomedical fields. There is a particular interest in establish bioengineering targeted nanomedicines for oral delivery of anti-tumor drugs for gastrointestinal tumours as gastric and colorectal cancer. The group also developed and validated novel in vitro cell-based intestinal model to evaluate the permeability and performance of drugs and drug delivery systems and proposed an innovative multicellular 3D colorectal cancer spheroid model used to screen efficacy of anticancer nanomedicines.

In this presentation, our most recent achievements of the establishment of nanomedicines, with passive and active targeting features for cancer cells will be described. Our approach involves innovative nanomedicines, with deep and comprehensive physical-chemical, in vitro and in vivo evaluation.

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