



Innocent: Innovative Nanopharmaceuticals: Targeting Breast Cancer Stem Cells by a Novel Combination of Epigenetic and Anticancer Drugs with Gene Therapy

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“innovative multifunctional nanopharmaceuticals to overcome low efficacy and frequent relapses in breast cancer”

The aim of the INNOCENT project is to develop innovative multifunctional nanopharmaceuticals to overcome low efficacy and frequent relapses in breast cancer treatment, with emphasis on cancer stem cells. The proposed multimodal COMBOBOMB will contain anti-tumour agent, targeting ligand designed to home in on malignancy together with imaging agent to light up the earliest stage of cancer. It integrates the diagnostic and therapeutic functions within a single nanostructure. The COMBOBOMB harbours four major components:

1) A selective targeting moiety 2) A diagnostic imaging aid for localization of the malignant tumour and its micro- or macrometastases; 3) A cytotoxic drug, and 4) a chemosensitising agent utilising gene therapy and epigenetic approaches.

