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Scientific research in the field of cancer immunology has led to the development of new potential cancer immunotherapies, such as monoclonal antibodies (mAb) or polynucleotides (RNA-based therapies), which are designed to act inside cancer cells, but also inside immune cells. Despite their huge potential, these therapies suffer of limited access to their target cells (cancer and immune cells) and tissue (primary tumor site and metastatic niches), often resulting in poor efficacy/toxicity balance.

The main goal of 2-INTRATARGET is to improve delivery mechanisms of the novel immunotherapies toward their targets inside cancer or immune cells. In our consortium, 5 European Partners, with complementary expertise in the fields of Nanomedicine and Cancer Immunotherapy plan to engineer multifunctional nanocarriers aimed to deliver: 1) monoclonal antibodies (mAb) into cancer cells, thereby targeting intracellular oncoproteins, and 2) RNA molecules into the Tumor Associated Macrophages (TAM), in order to re-educate them and switch the tumor microenvironment to one that kills tumor cells.