

Research Position at San Raffaele Scientific Institute

A research position is immediately available in the laboratory of Dr. Maria Pia Protti at the Tumor Immunology Unit, Division of Immunology, San Raffaele Scientific Institute of Milan.

The major interest in the laboratory is the study of the tumor microenvironment, and in particular of the immune cell infiltrates with anti- versus pro-tumor functions with special emphasis on the role of T helper (Th) cells.

In the last years we focused on pancreatic ductal adenocarcinoma and we identified a tumor-promoting function for tumor infiltrating Th2 cells that depends on a complex cross-talk between tumor cells, cancer associated fibroblasts and immune cells, within the tumor microenvironment and tumor draining lymph nodes, among which monocytes, tumor associated macrophages, dendritic cells, T cells and basophils (*De Monte L et al., J Exp Med 2011; 208:469; De Monte L et al., Cancer Res 76:1792*). Cytokines and soluble factors key to the development of Th2 inflammation were also identified, and specifically tumor-derived IL-1 and cancer associated fibroblast-derived thymic stromal lymphopoietin (TSLP) (*Brunetto E, De Monte L et al., J Immunother Cancer 2019;7:45*). Targeting of these molecules might impact on the immunosuppressive tumor microenvironment by repolarizing the immune contexture towards anti-tumor Th1 inflammation.

The candidate will be involved in the study of mechanisms of immunosuppression in the pancreatic cancer microenvironment, and of development of therapeutic strategies targeting molecules/cytokines of interest. These studies are conducted in the framework of an international EURONANOMED program testing in vitro and in vivo targeting strategies based on the delivery of therapeutics by nanoparticles. Specifically, the efficacy of blocking IL-1 availability in the tumor microenvironment using the IL-1R antagonist molecule incorporated in nanoparticles will be first tested.

We are looking for a highly motivated candidate (either a junior or post-doctoral fellow) with strong interest in immunology, and experience in cellular immunology and basic molecular biology. Experience in fluorescence and confocal microscopy would be considered a plus.

Interested candidates should send their CVs, a brief statement of research and career interest, and at least one contact information for references to: protti.mariapia@hsr.it.