I meeting del Laboratorio

Aperti a tutti

04 Giugno 2021, Ore 14.00

IMPROVING EGFR TARGETING THERAPIES BY A COMBINATION OF MONOCLONAL ANTIBODIES WITH AN IL-1 NEUTRALIZING DECOY

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ABSTRACT DELLA PRESENTAZIONE

Epidermal Growth Factor Receptor (EGFR) activates a robust signaling network to which tumors often become addicted. Over the last three decades, EGFR targeting has been intensely pursued as a treatment strategy for metastatic colorectal cancer (mCRC). One approach uses monoclonal antibodies (moAbs), such as cetuximab (CTX) to inhibit the extracellular domain of EGFR, thus blocking natural ligands binding. Unfortunately, patients often develop resistance, with consequent tumor growth and relapse. Tumors heterogeneity has been addressed as the main culprit for multiple escaping mechanisms, reflecting the high level of molecular heterogeneity in each metastatic site. Mechanisms of cancer cell resistance include either acquisition of new mutations or non-genomic activation of alternative signalling routes and, in this context, a role of IL-1 is emerging. For example IL-1 expression proved to be elevated in human breast, colon, lung and head and neck cancers, and patients with IL-1 producing tumors have generally bad prognosis. Also, our data associated poor responce to CTX with an incresed abudance of of IL-1A, IL-1B and IL-8 in a cohort of 150 xenopatients. Moreover we reported that IL-1 receptor 1 (IL-1R1) expression predicts relapse free survival in a cohort of 1700 CRC patients. For these reasons, we developed a recombinant decoy, namely mTRAP IL-1, combining the extracellular domain of murine IL-1R1 and the Fc domain of murine immunoglubin G1. Thus, our aim is to combine the mTRAP IL-1, able to sequester both IL-1A/B in the tumor microenvironment, with EGFR neutralization in order to synergistically impair CRC progression in vivo.

BIOSCKETCH DR. VALERIO GELFO

Valerio Gelfo is currently a Post-Doc fellow at University of Bologna - DIMES, working in the research group of Prof. Mattia Lauriola. During the Ph.D. in Oncology, Hemathology and Pathology at University of Bologna, Valerio has been working on the project: Emerging role of Interleukin-1 Receptor in the establishment of resistance in response to EGFR blockade. Valerio developed a strong collaboration with Prof. Y. Yarden lab. during his time at Weizmann Institute of Science, Rehovot, Israel. During the last four years Valerio published, as first author, in international peer-reviewed Scientific Journals and participated at several national and international meetings as speaker and, won a prize as best poster presented. Tutor of Histology in the faculty of Medicine and Surgery at University of Bologna.

Evento su Teams: Fai clic qui per partecipare alla riunione