



Corso di Dottorato in INFIAMMAZIONE, IMMUNITÀ E CANCRO

Dipartimento di **MEDICINA**

SYMPOSIUM - THURSDAY, NOVEMBER 21, 2024 10.00 am – 11.00 a.m.

Investigation of the tumor-reactive T-cell repertoire in pancreatic cancer as revealed by single cell sequencing in human tumor samples and mouse models

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Moderator: Prof. Vincenzo Bronte, Scientific Director of IOV, Padova, Italy

Personal Mission Statement

During my PhD project, I started off as a molecular biologist, studying gene regulation in cancer [1], but when I witnessed the power of T-cell therapy in pre-clinical mouse models [2], I decided to focus my post-doctoral career on cancer immunotherapy. Over the past years, I worked at Dana Farber Cancer Institute in Boston, as Head the Tumor Immunology Lab. at Leiden University Medical Center, and as principal scientist at Genentech Inc. in San Francisco. Since 2011, I am based at University Hospital Heidelberg and the German Cancer Research Center, where I am running two labs, one focusing on pancreatic cancer, and a second dedicated to the development of cancer immunotherapy drugs. The primary aims of the research in the former lab are (i) the development of personalized T-cell therapy as adjuvant treatment for patients with primary resectable pancreatic cancer [3] and (ii) the exploration of combination regiments in preclinical mouse models that employ complementary drugs targeting the cancer cells and the tumor microenvironment [4]. With the latter lab, I achieved 4 INDs over the past years in the context of a research alliance with Bayer Pharma, including small molecule drugs that enhance anti-tumor T-cell immunity through interference with TCR-downstream inhibitory pathways [5,6,7]. Since July 2024, the mission of this lab has broadened to transforming innovative research findings at our institute into a strong data package that supports drug development in the context of industry partnerships and spin off initiatives.

References: [1] *Cell* 62(3):527, [2] *Cell* 59(4):603, [3] *Sci Transl Med* 15(722):*eadh*9562, [4] *Nat Commun* 11(1):2176, [5] *Nat Rev Drug Discov* 21(11):821, [6] *Cancer Res* 83 (7_Suppl): ND04 [7] *J Med Chem* 67(19):17429

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Local Faculty: Prof. Michele Milella, Prof. Roberto Salvia, Prof. Aldo Scarpa, Prof. Vincenzo Corbo, Prof. Stefano Ugel, Dr Francesco De Sanctis (RTB)