

TUESDAY, SEPTEMBER 29

- 14.00 - 14.10 Welcome** M. Seri (Bologna)
P.L. Zinzani (Bologna)
- 14.10 - 14.20 Rationale and goals of the workshop** A. Curti (Bologna)
- 14.20 - 14.50 Lecture:**
Chairman: P.L. Zinzani (Bologna)
Clonal evolution in myeloid neoplasms and inflammatory stromal remodeling: implications for immunotherapy M.H.G.P Raaijmakers (Rotterdam, The Netherlands)

SESSION 1 – Inside out: how cell-intrinsic features outbreak AML immune microenvironment

Chairman: TBD

- 14.50 - 15.10 Leukemia hematopoietic hierarchies and differentiation state** A. Trumpp (Heidelberg, Germany)
- 15.10 - 15.30 AML genomic landscape: focus on IDH1 and FLT3** J. Nanni (Bologna, Italy)
- 15.30 - 15.50 Leukemia epigenetic remodelling: the lesson of allogeneic stem cell transplantation** L.A.E. Vago (Milan, Italy)
- 15.50 - 16.10 Epithelial-to-Mesenchymal Transition** S. Sangaletti (Milan, Italy)
- 16.10 - 16.30 Leukemic cell metabolic profile** G. Simonetti (Meldola, Italy)

16.30 - 16.50 Coffee break

SESSION 2 – Which are the hallmarks of AML immune microenvironment?

Chairman: TBD

- 16.50 - 17.10 Inflammation and T-cell dysfunctionality** S. Rutella (Sheffield University, UK)
- 17.10 - 17.30 Reprogramming the cytotoxic architecture of NK cells to sustain functional persistence** K.J. Malmberg (Oslo, Norway)
- 17.30 - 17.50 Bone marrow immune cells aggregation** O. Heidenreich (Utrecht, The Netherlands)
- 17.50 - 18.10 Immune dysregulation dominance and poor outcome: when MDS looks like AML** S. Kordasti (London, UK)
- 18.10 - 18.30 Aging and immune bone marrow microenvironment** C. Waskow (Jena, Germany)

WEDNESDAY, SEPTEMBER 30

SESSION 3 - So what? How to move a step forward into the clinics

Chairman: TBD

- 9.00 - 9.20** Dendritic cell immunotherapy in myeloid leukemia B.T. Gjertsen (Bergen-Norway)
- 9.20 - 9.40** AML-directed CAR T-cell therapies: where we stand M. Subklewe (Munich-Germany)
- 9.40 - 10.00** Is AZA+VEN the ideal combination backbone for immunotherapies? A. Curti (Bologna, Italy)
- 10.00 - 10.40** Is menin inhibition an option for immunotherapy?
- NPM1 and immune microenvironment M.P. Martelli (Perugia)
 - Menin inhibitors C. Papayannidis (Bologna)

10.40 - 11.00 coffee break

SESSION 4 – Novel tools, paradigms and perspectives: in search of immunological biomarkers

Chairman: TBD

- 11.00 - 11.20** Spatial omics J. Schröder (Tuebingen, Germany)
- 11.20 - 11.40** Amino Acids and Tryptophan Metabolites C.A. Opitz (Heidelberg, Germany)
- 11.40 - 12.00** 3D models U. Rietskina (Riga, Latvia)
- 12.00 - 12.20** Extracellular vesicles D. Forte (Bologna)
- 12.20 - 12.40** Real-time immunometabolism R.J. Argüello (Marseille, France)
- 12.40 - 13.00** Final discussion and concluding remarks A. Curti (Bologna)

Acute Myeloid Leukemia (AML) is a heterogeneous clonal disease deriving from a rare population of bone marrow leukemic stem cells. Although new and potent drugs have recently entered the clinical stage, the 5-year patient overall survival is largely unsatisfactory, reaching 30% and dropping to 5-10% in the elderly. Therefore, there is an urgent and unmet need for effective new treatment modalities for AML. In the last years, cancer immunotherapy is gaining much interest due to its unique characteristics, such as the absence of conventional drug resistance mechanisms and low grade of toxicity. In AML, the immunotherapy field is evolving and expanding. In particular, immunological drugs, i.e. immune checkpoint inhibitors, have been tested in early clinical trials and monoclonal antibodies as well as adoptive immunotherapy strategies are under active investigation. Despite a strong rationale, the clinical results of these approaches have not been satisfactory, and several questions need to be answered for a full exploitation of immune interventions in AML. Among them, the immunological effects of current therapies, such as chemotherapy agents, IDH1 inhibitors, FLT3-inhibitors, hypomethylating agents, BCL2 inhibitors, the contribution of drivers gene mutations on the immune microenvironment and their relevance for immunotherapy are still poorly investigated.

Based on these premises, the aim of the workshop is to discuss recent biological findings, which strongly indicate the specificity of bone marrow immune microenvironment as a critical issue for an effective biology-driven development of immunotherapies in AML. Moreover, the workshop aims at providing novel insights to move a step forward in the AML immunotherapy field by designing a new generation of combination clinical trials within the backbone of current therapies.

DESTINATARI DELL'INIZIATIVA

Destinatari iniziativa: BIOLOGO; TECNICO SANITARIO LABORATORIO BIOMEDICO; MEDICO CHIRURGO (EMATOLOGIA; ONCOLOGIA).