



UNIVERSITÀ
DI TRENTO

Dipartimento di
Biologia Cellulare,
Computazionale e Integrata - CIBIO

11 September

at 3.30 pm

room B108

Povo2

PhD
COLLOQUIA



Stephanie Halene

Department of Internal Medicine and Yale Cancer Center

RNA Regulation in Hematopoiesis and Myeloid Malignancies

Myeloid malignancies frequently harbor alterations in genes that regulate RNA processing, highlighting the importance of post-transcriptional control in hematopoietic cell function and transformation. Our work has examined how perturbations in RNA splicing and RNA modification affect hematopoiesis and contribute to myeloid disease. Studies of recurrent spliceosome mutations, including SRSF2 and U2AF1, have shown that altered RNA recognition and splicing can disrupt hematopoietic differentiation and modify RNA-protein interactions and cellular stress responses. In parallel, our work on N6-methyladenosine (m6A) has identified roles for RNA modification in hematopoietic stem and progenitor cell function, RNA stability, metabolism, and the control of endogenous double-stranded RNA and innate immune signaling. More recent studies examine how perturbation of m6A regulation affects leukemia cell fitness and cellular responses to endogenous nucleic acids. Together, these studies illustrate how altered RNA processing and modification can influence hematopoietic cell fate and contribute to vulnerabilities in myeloid malignancies.