



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

DIPARTIMENTO  
DI FARMACIA  
E BIOTECNOLOGIE

## AVVISO DI SEMINARIO

Il giorno **16 Maggio 2024**  
alle ore **14.30**

### **Prof.ssa Myriam Alcalay**

Full professor of Medical Genetics at the University of Milan

(ospite della Prof.ssa Elena Maestrini)

terrà un seminario in lingua inglese dal titolo:

## **The Role of Genomics in Oncology: from Mechanisms to Targeted Therapy**

Area tematica:

Cancer Biology; Genomics

*in presenza:*

**Aula E, UE1, via della Beverara 123/1, Bologna BO**

*e in streaming:*

<https://teams.microsoft.com/l/meetup-join/19%3aN09c0NlyEssBnF7ObCyDOQwkgDWm1qdd9f7F2nJV9fw1%40thread.tacv2/1631519544944?context=%7b%22id%22%3a%22e99647dc-1b08-454a-bf8c-699181b389ab%22%2c%22oid%22%3a%225a941351-ef41-4aa4-8771-fa50a6d62ca1%22%7d>

Collegli e studenti sono cordialmente invitati

## **ABSTRACT**

Sequencing of the human genome opened a new era of biomedicine leading to an unprecedented revolution in the understanding of diseases and, consequently, in prevention and treatment strategies. The founding element of this revolution is the possibility to decode diseases on the basis of causal genetic mechanisms. The most striking practical application is the development of treatment modalities exploiting agents that act directly on the molecular mechanisms implicated in disease and the quantification of genetic risk (precision medicine).

The impact of precision medicine is most evident in oncology. The advent of next-generation sequencing led to an impressive increase in knowledge concerning the genetic basis of cancer and the introduction of genomics in clinical practice is rapidly transforming the approach to cancer prevention and therapy. Inherited genetic variants are known to predispose to cancer, and specific somatic mutations predict the response to drugs allowing for the design of personalized therapeutic schemes. Drugs targeting specific genomic alterations responsible for tumor growth are employed routinely in cancer therapy and have radically changed the natural history of specific tumor types (targeted therapies).

## **BIOGRAPHICAL SKETCHES**

Prof. Myriam Alcalay obtained a Medical Degree and a Ph.D. in Hematology at the University of Perugia. She performed her post-doctoral training in the Human Genetics Lab of the IIGB in Naples (supervisor: Dott.ssa Daniela Toniolo) and the Molecular Biology Laboratory in Perugia (supervisor: Prof. Pier Giuseppe Pelicci). Since 1995 she joined the Department of Experimental Oncology of the European Institute of Oncology (IEO) in Milan.

Her main field of research concerns the molecular defects underlying acute myeloid leukemias. She has contributed to the identification and functional characterization of several major genetic abnormalities underlying AML pathogenesis and to the identification of specific expression profiles associated with AML at different stages of disease progression.

She is Unit Director of Functional Genomics at IEO and full professor of Medical Genetics at the University of Milan, where she is Head of the Biomedical Omics Master's programme.