



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DIPARTIMENTO
DI FARMACIA
E BIOTECNOLOGIE

AVVISO DI SEMINARIO

Il giorno **24 Marzo 2025**

alle ore **14:30**

Dr. Francesco Gualdrini

PostDoc, Senior Computational Biologist (IEO)

(ospite di Prof. Alberto Danielli)

terrà un seminario in lingua inglese dal titolo:

Dissecting Chromatin Dynamics and Transposable Element activation through Functional Screens and Integrative Computational Genomics

Area tematica:

Genomics; Drug discovery and development; Cancer Biology

in presenza:

Aula Ghigi, via Selmi 3 (entrata da via S. Giacomo 9), 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>

Il seminario è organizzato nell'ambito del Corso del Dottorato in BCM.
Collegli e studenti sono cordialmente invitati

ABSTRACT

Chromatin regulators play a fundamental role in orchestrating transcriptional responses to environmental cues, shaping cell identity and function. In this talk, I will present two complementary lines of research leveraging macrophages as a dynamic model system to investigate chromatin regulation and its functional consequences. First, I will discuss how chromatin remodelers and epigenetic regulators orchestrate complex transcriptional programs in response to immune stimuli. Second, I will introduce systematic screening approaches that exploit signal-induced chromatin dynamics to enable high-content functional profiling of clinical kinase inhibitors. By integrating experimental and computational methodologies, this work provides a framework for dissecting chromatin-mediated transcriptional control and developing scalable screening platforms.

BIOGRAPHICAL SKETCH

Dr. Francesco Gualdrini is a molecular and computational biologist with expertise in chromatin regulation, functional genomics, and cancer biology. He obtained his PhD at the London Research Institute – Cancer Research UK (now Francis Crick Institute) in the lab of Sir Richard Treisman, where he investigated mechanotransduction-dependent transcriptional programs and chromatin dynamics in fibroblasts and cancer models. As a Marie Curie Postdoctoral Fellow at the European Institute of Oncology (IEO), he developed high-throughput screening methodologies to dissect chromatin and epigenetic regulators in immune and inflammatory gene programs. His research also includes large-scale profiling of clinical kinase inhibitors for drug repurposing and the development of CRISPR/Cas9 screening platforms. Dr. Gualdrini is a strong advocate for open-source computational tools and workflows. He has mentored PhD students, contributed to international collaborations, and co-founded EPIKIN, a platform for systematic kinase inhibitor repurposing. His current research integrates experimental and computational approaches to uncover novel mechanisms controlling transposable elements in cancer.