



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA
DEPARTMENT OF
PHARMACY AND BIOTECHNOLOGY

CMB PhD School Seminars 2022-2023

on November 17th, 2023

at 2:00 p.m.

Aula B Farmacologia, Via Irnerio 48

and *online* on Microsoft Teams

<https://teams.microsoft.com/l/meetup-join/19:N09c0NIyEssBnF70bCyDOQwkgDWM1qdd9f7F2nJV9fw1@thread.tacv2/1631519544944?context=%7b%22Tid%22:%22e99647dc-1b08-454a-bf8c-699181b389ab%22,%22Oid%22:%225a941351-ef41-4aa4-8771-fa50a6d62ca1%22%7d>

Stefano Amente PhD

Associate Professor of Genetics
Department of Molecular Medicine and Medical Biotechnologies,
University of Naples 'Federico II', Naples, Italy.

will hold a seminar on

New roles of DNA lesions: friends or foes?

The 40-minutes scientific talk by Prof. Amente will be followed by a 30-minutes "Meet the speaker"
Q&A session with the PhD students

ABSTRACT

The exploration of DNA modifications has given rise to two distinct domains of study: epigenetics and DNA damage/repair. Nevertheless, the demarcation between these disciplines has grown less distinct as we've come to recognize that epigenetic modifications, such as 5mC, depend on DNA repair mechanisms for their elimination. Furthermore, oxidative DNA damage, primarily in the form of 8-oxo-7,8-dihydro-2'-deoxyguanosine (8-oxodG), can exert a positive influence on gene expression. In this presentation, I will delve into our recent research, which is centered on the identification of pairs of transcriptional regulatory regions—promoters and super-enhancers—that accumulate 8-oxodGs under stable conditions. These regions tend to cluster within specific fragile CTCF-insulated chromatin domains. Additionally, I will present novel findings that shed light on the pivotal role of 8-oxodG in the global regulation of gene expression.

BIOGRAPHICAL SKETCHES



Prof Stefano Amente, PhD, is an Associate Professor in Genetics and group Leader of Genetics laboratory at the Department of Molecular Medicine and Medical Biotechnologies, University of Naples Federico II. He has a long-standing competence in molecular genetics of cancer and gene expression. Recently, he is studying the molecular mechanisms that interconnect transcription to DNA damage/repair and in particular the epigenetic role of "scheduled" oxidative DNA damage in transcription and genomic instability. He awarded a Francesca Martini Prize (2016).

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