



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Biologia Cellulare e Molecolare PhD Program

Technologies for genome instability

Practical course for determination of single-gene or genome-wide DNA damage levels

Learning outcomes and Course contents

Upon completion of the course, the doctoral student possesses solid knowledge of new technologies for studying the cellular, molecular and genomic mechanisms leading to the onset of DNA damage and repair mechanisms. The doctoral candidate is familiar with the main methods of damage analysis and mapping, such as immunofluorescence with specific markers, Comet Assay, Proximity Ligation Assay, End-Seq and Bliss. The doctoral student also acquires the ability to select the most suitable ones for potential use in the design of his or her own research.

Teaching methods

The practical part of the course will take place on personal PCs. Those interested are asked to download and install the following freeware on their PCs: ImageJ and IGV.

Assessment methods

Assessment will be conducted at the end of the course as each student is expected to briefly present a scientific paper in which a method was used to study genomic instability. A short multiple-choice test will also be given.

How to attend

The course is aimed particularly at the first year of PhD.

Students interested in taking the course are asked to register by sending an email with the subject line "PhD class" to Jessica.marinello@unibo.it indicating whether they intend to take it in-person or online no later than December 9th, 2024, to allow classroom organization based on the number of interested parties.