11 DIC

4.30 P.M.
ROOM A207
POVO 1

ALBERTO CICCIA

COLUMBIA UNIVERSITY IRVING MEDICAL CENTER, NEW YORK

DISSECTING THE DNA DAMAGE RESPONSE NETWORK

Mutations in DNA damage response (DDR) genes compromise genome integrity and predispose to cancer and genetic disorders. However, the functional and clinical relevance of the vast majority of DDR gene mutations has not yet been determined. Furthermore, the interaction network among human DDR genes remains largely undefined. In my presentation, I will discuss our recent studies using CRISPR-dependent cytosine base editing screens, which have uncovered thousands of nucleotide variants in DDR genes resulting in altered cellular fitness upon DNA damage. Additionally, I will present our work using combinatorial CRISPR screening technologies to investigate genetic interactions within the DDR, which has enabled us to identify novel synthetic lethal relationships among DDR genes that hold potential clinical relevance.

CIBIO EXTERNAL SEMINAR

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