SEMINAR 2024

CIC biomaGUNE
MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

New therapeutic approach to halt drug resistance in cancer

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Host. Luis Liz-Marzan

Wednesday, 10th July
12.00 p.m.

CIC biomaGUNE - Seminar Room

Drug resistance is a major challenge in modern cancer therapy, despite the significant advances made with targeted therapies and immunotherapies for various cancers, including advanced BRCA1/2-mutated tumors. Our group has identified a new target that plays a critical role in cell-to-cell communication and enhances the effectiveness of targeted therapies involving DNA damage, such as PARP inhibitors. By recruiting DNA repair complexes to lamina-associated domains and promoting persistent DNA damage, this target contributes to genome instability and synthetic lethality. We have developed an innovative drug combination that uses nanovesicles to deliver the protein and mRNA of the identified target, thereby enhancing cell death and anti-tumor immunity in combination with targeted therapies. Our findings highlight a new player in DNA repair and drug response in the tumor context, with significant potential to improve treatment outcomes for patients with advanced tumors by exploiting key tumor vulnerabilities to overcome the limitations of current therapies.