# MIRO Working Package 3 (WP3) - Radiobiology

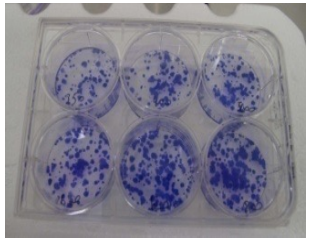
**D 3.1.3 Investigation of minibeam effect in breast tumorigenic and non tumorigenic cells (LNS-TIFPA) (12-36 months)**
**D 3.2.3 DNA damage high-content analysis induced by minibeam irradiation in breast tumorigenic and non-tumorigenic cells (12-36 months)**

- **Cell models and Experimental Conditions**

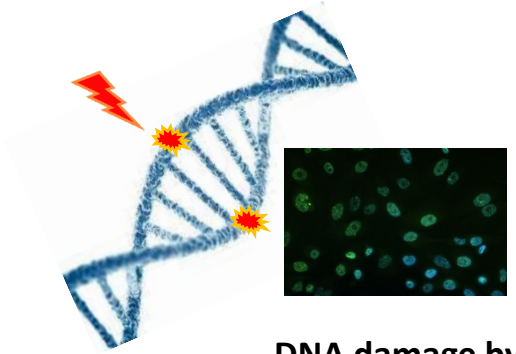
**Cell Lines**
MCF10A
MDA-MB-231

**Irradiation modalities**
- Conventional
- FLASH dose rates (250 Gy/sec)
- Mini beam irradiation

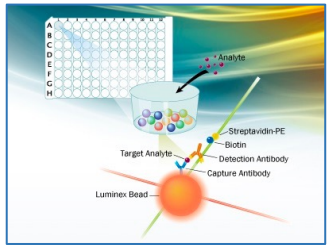
- **Biological endpoints**



**Cell survival by clonogenic assay and dose-response curves**



**DNA damage by immunofluorescence assay for γH2AX and 53BP1**




**Immunological profile (cytokines expression by Luminex assay)**

**STARTING IN OCTOBER**

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Minibeam Radiotherapy

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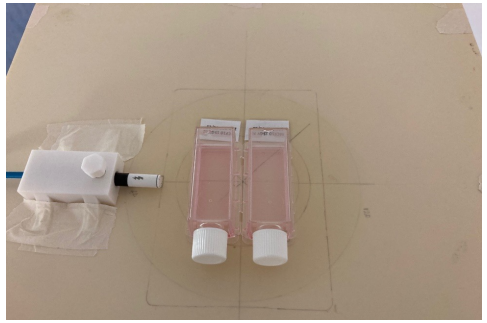
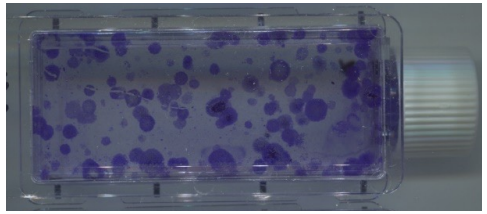
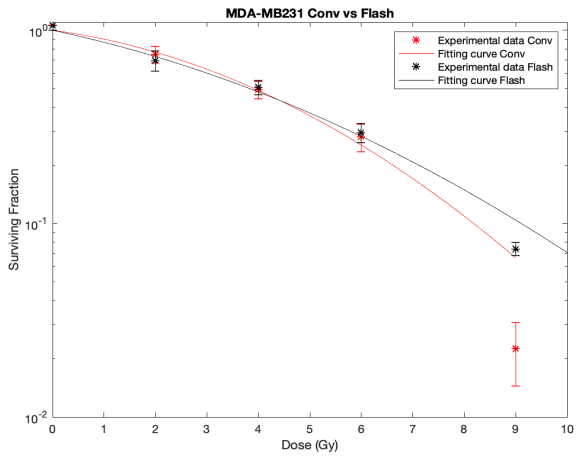
- **Background**

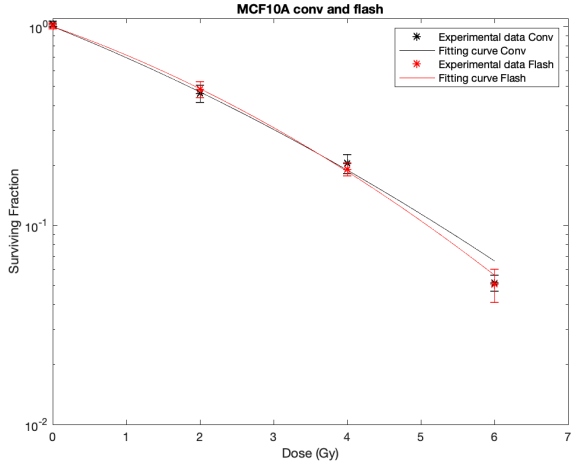
**Radiobiological characterization of the FLASH effect in tumorigenic and non-tumorigenic breast cancer cell line (MDA-MB-231 and MCF10A):**

- **dose-response curves (by clonogenic assay);**
- **analysis of the expression of cytokines and immunological factors (by Luminex assay).**





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# FTE

- Francesco Paolo Cammarata – 0,4
- Giorgio Russo – 0,1
- Giusi Irma Forte – 0,3
- Luigi Minafra – 0,5
- Valentina Bravatà – 0,5
- Gaia Pucci – 0,5