

## **FMRP AFFECTS GLIOBLASTOMA PROGRESSION REGULATING INVASION-ASSOCIATED GENES**

Pedini G. (1), Buccarelli M. (2), Pacini L. (1,3), D'Alessandris Q.G. (4), Martini M. (5), Giannetti S. (5), Sasso F. (1), Farace M.G. (1), Bianchi F. (6), Achsel T. (7), Larocca L.M. (5), Ricci Vitiani L. (2), Pallini R. (5) and Bagni C. (1,7)

*(1) Department of Biomedicine and Prevention, University of Rome Tor Vergata, Roma (Italy)*

*(2) Department of Oncology and Molecular Medicine, Istituto Superiore di Sanità, Roma (Italy)*

*(3) UniCamillus, Saint Camillus International University of Health and Medical Sciences, Roma (Italy)*

*(4) Institute of Neurosurgery, Fondazione Policlinico Universitario A. Gemelli IRCCS - Università Cattolica del Sacro Cuore, Roma (Italy)*

*(5) Pathology, Fondazione Policlinico Universitario A. Gemelli IRCCS - Università Cattolica del Sacro Cuore, Roma (Italy)*

*(6) Fondazione IRCCS Casa Sollievo della Sofferenza, Unit of Oncology Biomarkers, San Giovanni Rotondo, Foggia (Italy)*

*(7) Department of Fundamental Neurosciences (DNF), University of Lausanne, Lausanne (Switzerland)*

Converging evidence indicates that the Fragile X Mental Retardation Protein (FMRP) can modulate the aggressiveness of cancer. While FMRP functions have been extensively studied and partially uncovered in brain development, its involvement in the biology of brain tumours has not been explored yet. Here we show that FMRP expression directly correlates with worse outcome in patients with glioblastoma (GBM). Furthermore, high FMRP expression levels promotes brain infiltration and tumour growth in xenografts generated with human GBM stem-like cells (GSCs). Finally, the FMRP-regulated transcriptome of human GSCs highlights canonical pathways involved in the stemness properties and extracellular matrix remodelling ability. Our findings strengthened the role of FMRP in cancer and provide molecular evidence on its involvement in GBM progression.

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