



DR. MASSIMO SQUATRITO



Massimo Squatrito, born in Italy, obtained his PhD in Applied Genetics from the University of Milan, working at the European Institute of Oncology (IEO) in the laboratory of Giulio Draetta.

After a short postdoctoral training in the laboratory of Bruno Amati at IEO, at the end of 2006 he joined the laboratory of Eric Holland, first as postdoctoral fellow and then as a Research Associate, at the Memorial Sloan-Kettering Cancer Center, New York (USA). Since then he has been focusing his research on the study of brain tumorigenesis and response to therapy.

At the end of October 2012 Massimo joined the Centro Nacional de Investigaciones Oncológicas as Junior Group Leader and director of the Seve Ballesteros Foundation - CNIO Brain Tumor group.



OVERCOMING NTRK INHIBITORS RESISTANCE

The occurrence and importance of gene fusions in glioma has been appreciated only recently, largely due to high-throughput technologies, and gene fusions have been indicated as one of the major genomic abnormalities in glioblastoma (GBM), the most frequent and aggressive glioma subtype. The functional role of the majority of these alterations is completely unexplored.

Recurrent gene fusions involving the Tropomyosin receptor kinases (Trk) receptor family have been recently described in a variety of tumors, including gliomas. NTRK gene fusions are emerging as novel targets across multiple tumor types, because of the increasing availability of new drugs with anti-Trk activity. However, analogously to other targeted therapies, the emergence of acquired resistance may restrict the efficacy of Trk inhibitors.

I will discuss our work focused on the characterization of the mechanisms of resistance to first-generation NTRK inhibitors and present potential treatment approaches to overcome them.