Title: Understanding changes that occur in peritumoral tissue during glioma progression and finding novel approaches to develop effective therapeutic strategies to counteract glioma growth.

Abstract: Gliomas are the most common primary brain tumors, accounting for 30% of all primary brain tumors and 80% of all malignant ones. Glioblastoma (GB) is the most aggressive form, making up 54% of all brain tumors, affecting 3 in 100,000 people with nearly 23,000 cases per year worldwide. The current standard-of-care is represented by the surgical resection of the tumoral mass followed by cycles of radio- and chemotherapy. However, this standard protocol of intervention is only partially effective; indeed, the patients survival rate is about 12-15 months after diagnosis. Developing new approaches to counteract this disease represents one of the hardest challenges of our time for neuro-oncologists, but it is clearly necessary. Thus, this research project is divided into two parts. The first one is focused on the study of modifications that occur in the peritumoral tissue along with glioma progression; studying and understanding such changes might shed new light on the mechanisms that underlie this terrible disease, unravelling biomarkers or key factors that might be therapeutically targeted. The second part of the project has the main goal to develop novel approaches to create alternative, non-invasive therapeutic strategies to counteract glioma growth. This project involves collaborations with many partners that encompass from basic research to clinics.

References:


Keywords: glioma; brain tumor; epilepsy
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