

<b>PI</b>	Raffaella Bonecchi
<b>PROJECT TITLE</b>	Role and predictive potential of distinct circulating and tumor-associated neutrophil subsets in progression and therapeutic response of malignant gliomas
<b>ABSTRACT</b>	High grade gliomas (HGG) are highly aggressive tumors with a dismal prognosis despite our aggressive multimodality treatment approach. Great expectations are presently on immunotherapy but a better understanding of immunosuppressive mechanisms operating in different HGG variants is needed. Preliminary data identify distinct subsets of HGG-associated neutrophils, and we propose to functionally characterize these tumor-associated and circulating distinct neutrophil subsets in distinct HGG variants. A prospective cohort will also validate the ability of immune biomarkers to identify patients with greater risk of early recurrence and guide patient selection for immunotherapies targeting the myeloid lineage
<b>FUNDING REFERENCE (AMOUNT, STARTING DATE AND DURATION)</b>	Progetto ordinario Ricerca Finalizzata Ministero della salute 192000 euro Starting date: 07-2021 Duration: 3 years
<b>MAIN TECHNICAL APPROACHES TO CARRY OUT THE PRESENT PROJECT</b>	Advanced immunophenotypic and transcriptomic technologies
<b>SCIENTIFIC REFERENCES RELATED TO THE PRESENT PROJECT (max 5)</b>	<ol style="list-style-type: none"> <li>1. Massara M, Bonavita O, Savino B, Caronni N, Mollica Poeta V, Sironi M, Setten E, Recordati C, Crisafulli L, Ficara F, Mantovani A, Locati M, Bonecchi R. ACKR2 in hematopoietic precursors as a checkpoint of neutrophil release and anti-metastatic activity. Nat Commun. 2018 Feb 14;9(1):676.</li> <li>2. Massara M., Persico P, Bonavita O, Mollica Poeta V, Locati M, Simonelli M, Bonecchi R. Neutrophils in Gliomas Front Immunol. 2017 Oct 26;8:1349.</li> <li>3. Jaillon S, Ponzetta A, Di Mitri D, Santoni A, Bonecchi R, Mantovani A. Neutrophil diversity and plasticity in tumour progression and therapy..Nat Rev Cancer. 2020 Sep;20(9):485-503.</li> <li>4. Mollica Poeta V, Massara M, Capucetti A, Bonecchi R. Chemokines and Chemokine Receptors: New Targets for Cancer Immunotherapy. Front Immunol. 2019 Mar 6;10:379.</li> <li>5. Locati M, Mantovani A, Bonecchi R. Atypical matters in myeloid differentiation. Nat Immunol. 2017 Jun 20;18(7):711-712.</li> </ol>