

Biosketch Giulia Casorati

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Giulia Casorati obtained a degree in Biology and a PhD in Human Genetics at the University of Torino working on the genetic structure of TCR and immunoglobulin variable regions. Between 1988-91, she joined Klaus Karjalainen lab at the Basel Institute for Immunology, where she studied the structure of the TCRs $\alpha\beta$ and $\gamma\delta$ (*Casorati Exp Med* 1989; *Casorati Eur J Immunol* 1993) and contributed to the identification of group CD1-restricted T cells and of CD1d-restricted invariant NKT cells together with Paolo Dellabona and Antonio Lanzavecchia (*Dellabona J Exp Med* 1993; *J Exp Med* 1994). Since 1992 she joint-heads with Paolo Dellabona the Experimental Immunology Unit at San Raffaele Scientific Institute in Milano, where she has been investigating fundamental mechanisms and translational aspects of the T cell immune response in cancer, with particular emphasis on CD1-restricted T and iNKT cells, both in transgenic mouse models generated in the laboratory, or in physiologic and pathologic human contexts. In parallel, her work has also contributed to the characterization of the dynamics of the tumour-specific T cell response in pediatric patients undergoing bone marrow transplantations for hematological malignancies (*Montagna Blood* 2006), clearly implying a role for a spontaneous T cell response in the immunosurveillance of leukaemia. More recently, she has demonstrated the role for CD1-restricted T cells in the control of haematological tumours, showing that CD1c self-reactive T cells recognize a new tumor associated lipid antigen, overrepresented in cancer cells (*Lepore J Exp Med*. 2014), while iNKT cells are critical to control AML and CLL progression (*de Lalla J Immunol*; *Gorini Blood* 2017). This study prompted the design of a donor-unrestricted adoptive cell therapy strategies targeting acute leukemia with T lymphocytes engineered with lipid-specific TCR genes (*Consonni Nat Commun* 2021). She has also demonstrated that iNKT cells are natural components of the tumour microenvironment, where they modulate myelomonocytic cell population to enforce proinflammatory and immunostimulatory programs (*Cortesi Cell Reports* 2018) prompting to the idea to harness iNKT cells with tumour specific TCRs to generate bispecific engineered lymphocytes targeting protumour macrophages and tumour cells at the same time.

Giulia Casorati is associate Editor at *Frontiers in Immunology* and *Frontiers in Oncology*, and member of the Italian Society of immunology and clinical Immunology and Allergology-(SIICA), of the Italian Network for Tumor Biotherapy (NIBIT) and of the European Hematology Association (EHA).

She is listed among the top cited Italian scientists

http://www.topitalianscientists.org/TIS_HTML/Top_Italian_Scientists_Biomedical_Sciences.htm

Giulia Casorati has published more than 120 papers on international journals with a total h index = 48 (ISI Web of Science 2021)

Being part of the NIBIT Board of Directors will give me the opportunity to share with the community my long standing experience in tumor immunology and cell therapies with engineered T cells, helping to strengthen national and international connections that can advance our Network.