

Dissecting the roles of natural killer T cells in autoimmune disorders and malignancy

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Natural killer T (NKT) cells are a heterogeneous group of T cells that share properties of both T cells and natural killer (NK) cells. Many of these cells recognize the non-polymorphic CD1d molecule, an antigen-presenting molecule that binds self and non-self glycolipids and lipids. NKT cells are able to influence autoimmune and cancer diseases, thanks to their innate and adaptive immune properties. A hallmark of NKT cells is their ability to express pro- and anti-inflammatory T helper(h)1 and Th2 cytokines upon antigenic stimulation, and to modify both inflammatory mediators and late stage T cell responses. Thus, NKT cells are considered critical cells in regulatory events that direct the inflammatory response. Additionally, NKT cells can regulate the functions of other NKT subsets. The purpose of this review is to highlight the importance of NKT cells as regulators of autoimmunity disorders and cancer.

Biography

Bimonte Sabrina received her Degree in Biological Sciences from University of Study Federico II, Naples, Italy in 2004. She received her PhD in "Molecular Medicine", from SEMM University of Study Federico II, Naples, Italy in 2010. She has completed her Pre-doctoral research in genetics and molecular biology in the group of Prof. Franco B. at TIGEM during 2004-2010. She has done her Post-doctoral research in cellular biology and immunology in the group of Prof. Illingworth at CNR during March 2010- October 2010. After that she continued her research in cancer biology and immunology in the group of Dr. Arra C at Istituto Nazionale dei Tumori Fondazione G. Pascale.

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