

Natural Killer lymphocytes: “Null cells” no more

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SUMMARY

Natural Killer (NK) lymphocytes were initially described as potent effector cells that, unlike T lymphocytes, were able to kill targets in the absence of a priori stimulation and without specific recognition mechanisms. Over the past ten years however, it has been clearly demonstrated that NK cell function is regulated by a number of surface receptors that bind specific ligands expressed by target cells. Some of these receptors display inhibitory functions and recognize MHC class I molecules expressed by normal autologous cells that, as a consequence, are spared from indiscriminate NK-mediated killing. Other receptors are involved in NK cell activation against allogeneic cells or cells that, upon viral infection or tumor transformation, down-regulate MHC Class I expression. Altogether these data provide important advances toward the understanding of the complexity of the molecular mechanisms that regulate NK-mediated functions.