Titel des Beitrags:
The bone marrow microenvironment is a critical player in the NK cell response against acute myeloid leukaemia in vitro.

Abstract:
Immune therapy for acute myeloid leukaemia (AML) has been largely disappointing. One possible explanation might lie in the microenvironment of the bone marrow, comprising cellular (e.g. mesenchymal stromal cells, MSC) and non-cellular components (e.g. hypoxia). The purpose of this study was to investigate the effects of these components in the immune response against AML in vitro. In vitro exposure of lymphocytes to hypoxia resulted in an increased expression of CD69 as an activation marker in NK cells only, with subsequently enhanced cell lysis of K-562 cell line by NK cells but not in lysis of primary blast. However, co-culture of AML cells with MSC significantly protected leukemic blasts from NK cell mediated lysis, mainly in a specific manner requiring cell-to-cell contact with supportive MSC. These data imply a relevant but unequivocal role of hypoxia and MSC the immune response against AML blasts.