



CCI-08

## **The role of microenvironmental niches for hematopoiesis in chronic inflammation**

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### **Abstract**

For the study of chronic inflammation, in which innate and adaptive immune cells play crucial roles, it is important to understand the functions of the special microenvironments known as niches, which control hematopoietic stem and progenitor cells to provide appropriate numbers of blood cells, including immune cells in the bone marrow. Although the nature of the niches have been the long-lasting unresolved issue, we found that a small population of bone marrow non-hematopoietic cells with long processes, expressing high amounts of the chemokine CXCL12, termed CXCL12-abundant reticular (CAR) cells function as niches for hematopoiesis. Our aim is to clarify the role and molecular regulatory mechanism of CAR cells in controlling hematopoiesis in chronic inflammation, providing new insight and basis for developing novel niche-based therapies.