

Sônego F, **Alves-Filho JC, Cunha FQ.** (2014). Targeting neutrophils in sepsis. *Expert Rev Clin Immunol.* Aug;10(8):1019-28. doi: 10.1586/1744666X.2014.922876. Epub 2014 May 28.

Sepsis continues to have a high mortality rate worldwide. The multi-step effects of this syndrome make it difficult to develop a comprehensive understanding of its pathophysiology and to identify a direct treatment. Neutrophils play a major role in controlling infection. Interestingly, the recruitment of these cells to an infection site is markedly reduced in severe sepsis. The systemic activation of Toll-like receptors and high levels of TNF- α and nitric oxide are involved in the reduction of neutrophil recruitment due to down-regulation of CXCR2 in neutrophils. By contrast, CCR2 is expressed in neutrophils after sepsis induction and contributes to their recruitment to organs far from the infection site, which contributes to organ damage. This review provides an overview of the recent advances in the understanding of the role of neutrophils in sepsis, highlighting their potential as a therapeutic target.