

Eosinophils: Emerging Insights into Disease Mechanisms and Therapeutics

Yuan Chen¹, Yuhua Liu^{2,*}

¹Affiliated Hospital of Hangzhou Normal University, Hangzhou Normal University, Hangzhou, China

²Laboratory Medicine Department, Affiliated Hospital of Hangzhou Normal University, Hangzhou, China

Email address:

chenyuan200011@163.com (Yuan Chen), liuyuhua@hznu.edu.cn (Yuhua Liu)

*Corresponding author

Abstract

Eosinophil is a type of leukocyte, belonging to the granulocyte family, with eosinophilic granules in the cytoplasm and containing a variety of biologically active substances. Eosinophils have a variety of functions and are involved in inflammatory response, immune defense, and tissue repair. Eosinophils are associated with the development of many diseases, such as infectious diseases, allergic diseases, hematologic diseases, etc. In addition, more and more studies in recent years have found that eosinophils have a significant correlation with autoimmune diseases, solid tumors, coronary heart disease and even Alzheimer's disease. Eosinophils are involved in the development of diseases through the release of toxic proteins, cytokines and chemokines, as well as interactions with other cells. Focusing on the biological properties and functions of eosinophils will help to clarify the pathogenesis of related diseases, and thus provide further research directions and therapeutic strategies for targeting eosinophils. This includes the research and development of drugs, targeted therapies, immunotherapies, cellular therapies, etc. to regulate their functions. In this paper, we review the structure and function of eosinophils, the role they play in related diseases, and future therapeutic strategies, so that researchers and clinicians can have a more in-depth understanding of eosinophils, which can be applied to further research or clinical diagnosis and treatment of diseases.

Keywords

Eosinophil, Disease-related, Immune Regulation, Disease Pathogenesis, Targeted Therapy