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Name of Journal: *World Journal of Translational Medicine*

ESPS Manuscript No: 20192

Manuscript type: **Review**

Contributions of neutrophils to the adaptive immune response in autoimmune disease

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#### Abstract

Neutrophils are granulocytic cytotoxic leukocytes of the innate immune system that activate during acute inflammation. Neutrophils can also persist beyond the acute phase of inflammation to impact the adaptive immune response during chronic inflammation. In the context of the autoimmune disease, neutrophils modulating T and B cell functions by producing cytokines and chemokines, forming neutrophil extracellular traps, and acting as or priming antigen presentation cells. Thus, neutrophils are actively involved in chronic inflammation and tissue damage in autoimmune disease. Using RA as an example, this review focuses on functions of neutrophils in adaptive immunity and the therapeutic potential of these cells in the treatment of autoimmune disease and chronic inflammation.

**Key words:** Neutrophils; chronic inflammation; autoimmune disease; Rheumatoid

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