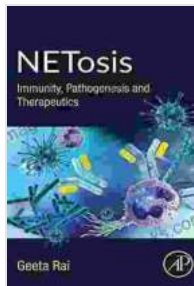


Netosis: A Novel Immune Defense Mechanism with Therapeutic Implications



NETosis: Immunity, Pathogenesis and Therapeutics

by Kenneth Kee

★★★★☆ 4.1 out of 5

Language : English

File size : 6325 KB

Text-to-Speech : Enabled

Screen Reader : Supported

Enhanced typesetting : Enabled

Print length : 200 pages



Netosis is a recently discovered immune defense mechanism that involves the release of NETs (neutrophil extracellular traps). NETs are composed of DNA, histones, and antimicrobial peptides that are released from neutrophils, a type of white blood cell. Netosis is a form of programmed cell death that is distinct from apoptosis and necrosis.

Role of Netosis in Health and Disease

Netosis plays a crucial role in innate immunity, the first line of defense against invading pathogens. NETs trap and kill bacteria, viruses, and fungi. They also promote inflammation and recruit other immune cells to the site of infection.

However, excessive or dysregulated netosis can contribute to the development of autoimmune diseases and chronic inflammatory conditions.

For example, in systemic lupus erythematosus (SLE), NETs are found in high levels in the blood and tissues, and they contribute to the tissue damage that is characteristic of the disease.

Therapeutic Applications of Netosis

The discovery of netosis has opened up new avenues for therapeutic intervention. Modulating netosis could be a potential strategy for treating autoimmune diseases, chronic inflammatory conditions, and infections.

One potential therapeutic approach is to inhibit netosis in autoimmune diseases. This could be achieved by targeting the enzymes that are involved in NET formation. Another approach is to promote netosis in infections. This could be done by using agents that stimulate neutrophils to release NETs.

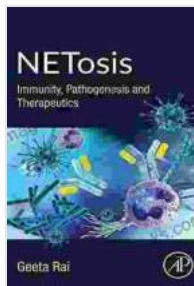
Current Research

Research on netosis is rapidly expanding. Scientists are investigating the molecular mechanisms of netosis, the role of NETs in different diseases, and the potential therapeutic applications of netosis.

Some of the most exciting current research areas include:

- * The role of NETs in autoimmune diseases, such as SLE and rheumatoid arthritis
- * The role of NETs in chronic inflammatory conditions, such as atherosclerosis and obesity
- * The potential use of NETs as a biomarker for disease diagnosis and prognosis
- * The development of new therapeutic strategies that target netosis

Netosis is a novel immune defense mechanism that is involved in both health and disease. The discovery of netosis has opened up new avenues for understanding the immune system and for developing new therapeutic strategies for a wide range of diseases.



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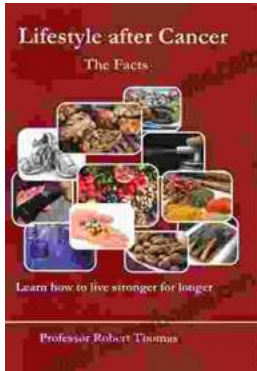
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