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INHIBITORS OF INFLAMMATORY INJURIES CAUSED BY NEUTROPHIL EXTRACELLULAR TRAPS (NETs)

THERAPEUTICS

Neonatal Neutrophil Extracellular Trap (NET)-inhibitory factor and related peptides that reduce formation of NETs that lead to inflammatory injury.

TECHNOLOGY TYPE

Peptide
Sepsis
Neutrophil Extracellular Traps
Tissue Injury
Anti-inflammatory
Autoimmune Diseases

STAGE OF DEVELOPMENT

- Efficacy demonstrated through preclinical infection tests inhibiting NET formation.

- Additional studies required.

IP PROTECTION

Nationalized PCT Pending in the United States and Europe

Methods for treatment of and prophylaxis against inflammatory disorders
US20170232081A1

Other Applications Pending

LEARN MORE

Reference Number: U-5576

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TECHNOLOGY SUMMARY

While NET formation is a potent mechanism for killing microbes, emerging evidence suggests that NETs potentiate vascular and tissue injury in inflammatory syndromes. In fact, NET formation contributes to several inflammatory disorders including acute lung injury, sepsis, small vessel vasculitis, systemic inflammatory response syndrome, and chronic autoimmune diseases. In addition, recent results indicate NETs may also be involved in some cancers. New inhibitors block NET development and prevent further tissue injury associated with inflammation. This new technology targets inappropriate, maladaptive, and injurious NET formation without altering other key neutrophil activities such as chemotaxis, phagocytosis, and ROS generation.

FEATURES AND BENEFITS

- Decreases NET mediated injuries in those suffering from an inflammatory syndrome.
- Targets negative NET formation without affecting key neutrophil activities, thereby eliminating problematic side effects.
- Design allows for fewer limitations and increased efficacy across broader applications.

RECENT PUBLICATIONS

Yost, C.C., Schwertz, H., Cody, M.J., Wallace, J.A., Campbell, R.A., Vieira-de-Abreu, A., Araujo, C.V., Schubert, S., Harris, E.S., Rowley, J.W., Rondina, M.T., Fulcher, J.M., Koening, C.L., Weyrich, A.S., Zimmerman, G.A. (2016). Neonatal NET-inhibitory factor and related peptides inhibit neutrophil extracellular trap formation. *The Journal of Clinical Investigation.* 126(10):3783–3798. doi:10.1172/JCI83873

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DATE UPDATED: 12/18/2017