Therapeutics & Vaccines

Protein Tyrosine Phosphatase 1B Inhibited Neutrophils, Neutrophil-Dendritic Cell Hybrids and Uses Thereof

View U.S. Patent Application Publication No. US-2023-0323301 in PDF format.

WARF: P220160US03

Inventors: Igor Slukvin, Anna Huttenlocher, Morgan Giese, Ho Sun Jung, David Bennin

The Invention

UW-Madison researchers have developed methods for preparing PTP1b-deficient neutrophils, which exhibit improved recruitment and antimicrobial functions. The inventors employed CRISPR/Cas9 to delete PTP1b from iPS cells, and then utilized an existing method (P190225) to differentiate the iPSCs into neutrophils. PTP1b-/- neutrophils displayed increased cellular migration and inflammatory cytokine signaling (e.g., IL-6 and TNF) in response to bacterial stimuli, when compared with wildtype cells.

Additional Information

For More Information About the Inventors

- Anna Huttenlocher
- Igor Slukvin

Tech Fields

- Pluripotent Stem Cells : Differentiation
- Therapeutics & Vaccines : Anti-infectives (antibacterials, antifungals, antivirals)

For current licensing status, please contact Andy DeTienne at adetienne@warf.org or 608-960-9857