



Immune Selective Anti-Inflammatory Derivatives

ImSAIDs™ TECHNICAL SUMMARY

BACKGROUND:

Leukocyte (white blood cell) activation and transmigration are the earliest and most important events that occur during inflammation. Leukocytes, which participate in all inflammatory processes, are necessary in host defense but excessive and inappropriate activation can result in worsening of pathology. Granulocytes, in particular, release a spectrum of substances which amplify the inflammatory cascade as illustrated in pancreatitis, sepsis, asthma, ischemic reperfusion injury, trauma, hepatitis, etc. It is well accepted that modulating the excessive activation and migration of leukocytes is a new target for pharmaceutical development^{1, 2}. In summary, the current anti-inflammatory repository is deficient for a variety of inflammatory and critical care indications which propose to be satisfied by the ImSAIDs™.

ImSAIDs™ DESCRIPTION:

ImSAIDs™ represent an entirely new generation of biologically derived immuno-modulating anti-inflammatory molecules. ImSAIDs™ are not steroids or NSAIDs and act via a cellular mode of action that inhibits inflammation triggered by the innate immune response. ImSAIDs™ interact with co-stimulatory cell surface receptors to inhibit excessive activation and infiltration of leukocytes without compromising the immune system. This upstream approach reduces the release of pro-inflammatory cytokines, digestive enzymes, and oxidative burst products thereby inhibiting inflammatory amplification and preserving collateral tissue.

ImSAIDs™ MECHANISM OF ACTION: The ImSAIDs™ are rapid acting molecules that:

1. Modulate the activation and chemotaxis of granulocytes^{3,4,5,6}
2. Reduce the production of reactive oxygen species⁷
3. Reduce the effects of endotoxin^{8,9}
4. Reduce allergic and anaphylactic reactions^{10,11,12}

KEY BENEFITS OF THE VACCINE:

ImSAIDs™ appear to have substantial advantages when compared to NSAIDs and glucocorticoids, such as:

- A wide margin of safety with no known toxicity
- No known immuno-suppression
- Acts on central regulators of inflammation, the immune cells, providing for a robust and comprehensive effect
- A broad spectrum of activity for use in indications that fall well outside the scope of NSAIDs or steroids
- Synthetic manufacturing allows chemical optimization and purity with large scale production and enhanced yield

ImSAIDs™ is a trademark of IMULAN BioTherapeutics, LLC

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DEVELOPMENT STATUS: Clinical studies are currently on-going.

PATENTS:

- 7,153,835: Anti-inflammatory peptides
- 7,094,760: Peptides for the treatment of inflammation and shock
- 6,586,403: Treating allergic reactions and inflammatory responses with tri- and dipeptides
- 6,852,697: Peptides for treatment of inflammation and shock
- WO03066670: Anti-inflammatory peptides
- WO9806742: Peptides for treatment of inflammation and shock
- WO03066670: Dipeptides and tripeptides with anti-inflammatory activity

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