

## New Therapeutics for Autoimmune and Inflammatory Diseases

## **Proprietary Anti-Inflammatory Technologies**

Noxopharm Ltd (ASX:NOX) is an innovative Australian biotech company discovering and developing novel proprietary antiinflammatory technologies, including a pioneering approach to optimising mRNA vaccines. Led by a highly experienced management team, its Sofra™ platform covers mRNA vaccines and the treatment of autoimmune and inflammatory diseases.

## **Blocking Inflammation at its Source**

The Noxopharm Sofra<sup>™</sup> technology platform is based on ultra-short oligonucleotides with diverse potential applications in the modulation of inflammation.

Noxopharm and its subsidiary Pharmorage, in strategic collaboration with the Hudson Institute of Medical Research, have developed several preclinical 3-base oligonucleotides (3-mers) that have displayed highly potent and selective reduction of inflammation through binding to Toll-like receptors 7 and 8 (TLR7 and TLR8).

Unlike most anti-inflammatory drugs that target the end-stages of the inflammatory process, Noxopharm's oligonucleotides act by blocking inflammation at its source.

The company is currently developing these oligonucleotides as a promising new class of therapeutics for autoimmune diseases such as lupus and psoriasis that involve overactivation of TLR7. A recent study, presented at the 2023 Lupus-KCR Conference in Seoul, demonstrated that topical application of Noxopharm's SOF-XX drug candidate supresses inflammation and ameliorates disease in a mouse model of cutaneous lupus erythematosus-like inflammatory skin disease triggered by TLR7 activation.

## **Unique Solution for Global Market**

There are currently no approved therapeutic inhibitors of TLR7 on the market, making this a unique solution for an urgent unmet need.

Autoimmune diseases can affect almost any organ in the body, including the brain, and in most cases more than one organ or organ system. This group of diseases often involves inflammation, with symptoms such as joint stiffness, pain, loss of function, and rashes, with periods of remission and periods of increased disease activity.

Estimates of the number of individuals suffering from autoimmune diseases in the US alone range from 14 to 24 million cases. The global immunology market is projected to grow from USD 92 billion in 2021 to USD 158 billion in 2028.

The Hudson Institute of Medical Research and Pharmorage have recently been supported with AU\$3 million in government grants. Noxopharm is also actively investigating the potential for its Sofra<sup>™</sup> oligonucleotides to limit the inflammatory side effects associated with mRNA therapeutics and vaccines via the company's proprietary SOF-VAC<sup>™</sup> vaccine enhancer.



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