New data confirms cancer-fighting potential

Highlights

- **Novel immune activation approach shown in *ex vivo* and *in vivo* experiments**
- **Builds on breakthrough immune system discovery**
- **Market projected to reach US$185 billion by 2035**

Sydney, 26 May 2026: Clinical-stage biotech company **Noxopharm Limited (ASX:NOX)** is pleased to announce new data showing how the Sofra™ technology platform will be leveraged to fight cancer.

The field of immuno-oncology, which involves harnessing the body's own immune system to destroy cancer cells, has reshaped cancer treatment over recent years and helped millions of patients. The market is projected to grow from US$35 billion in 2025 to US$185 billion by 2035. However, response rates remain limited and there is an ongoing need for new approaches.

Toll-like receptors (TLRs) are crucial sensors within the human immune system. Their activation is a primary area of cancer research, with numerous pharmaceutical companies developing potent anti-cancer agents based on these receptors and having them approved.

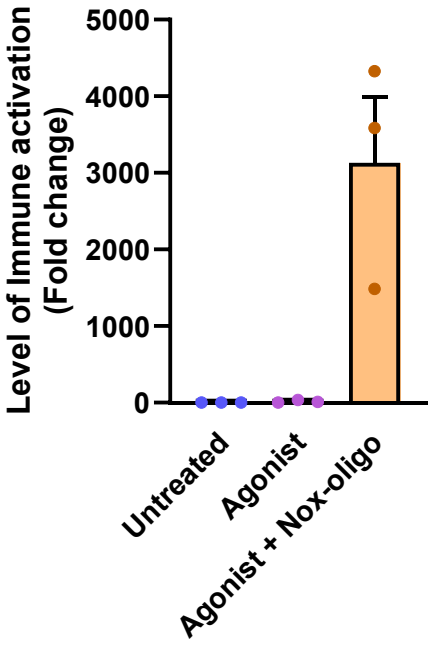
Noxopharm is currently advancing a drug development program aimed at harnessing the power of Toll-like receptor 8 (TLR8) against cancer. The company has now developed oligonucleotides capable of greatly amplifying the activity of TLR8 compared to current best-in-class drugs in clinical development, which in turn stands to enhance the cancer-fighting activity of standard-of-care therapies like chemotherapy and radiotherapy.

This combinatorial approach opens up a new opportunity for more potent, controllable and targeted activation of the immune system against cancer, exploiting a novel mechanism that was uncovered through in-depth studies of TLR8 biology, as recently published in *Nature Immunology* and a preprint.

This places the innovative technology, which is protected by a granted US patent, in a key position to unlock the clinical potential of TLR8 activation in immuno-oncology and potentially become a competitive new addition to the global cancer treatment market.

Noxopharm has conducted a study showing that one such proprietary TLR8-amplifying oligonucleotide was able to boost the activity of a clinical-stage small molecule TLR8 agonist more than 200-fold in human skin biopsies. Additionally, a TLR8-amplifying oligonucleotide increased TLR8 activity almost 3-fold in an animal model.

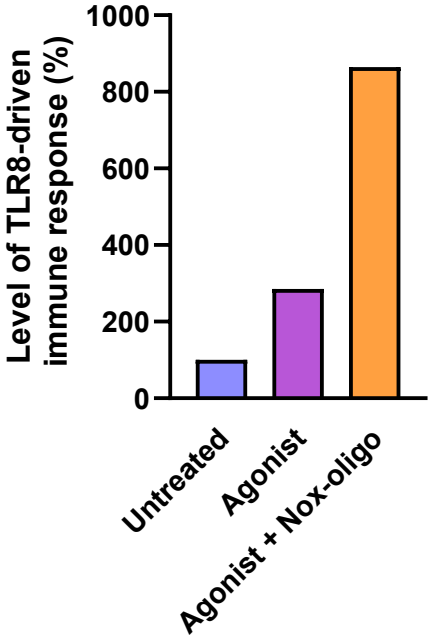
Figure 1 – A Sofra oligonucleotide boosts the TLR8-driven immune response induced by an agonist in a human skin biopsy model



Human skin biopsies were cultured *ex vivo*. An immune response was induced by a TLR8 small molecule agonist and assessed using an immune activation biomarker. A TLR8-potentiating oligonucleotide increased the level of immune activation by more than 200-fold.

Immune activation biomarker: Level of an immune activation biomarker was measured and normalized to the untreated group; Agonist: Motolimod, a TLR8 agonist; Nox-oligo: a TLR8-potentiating oligonucleotide; Mean ± Standard Error of the Mean is shown.

Figure 2 – A Sofra oligonucleotide boosts the TLR8-driven immune response induced by an agonist in a transgenic mouse model



A TLR8-driven immune response was induced by an agonist in transgenic mice expressing human TLR8, and assessed by gene expression analysis of three TLR8-responsive biomarkers. When combined with a systemically delivered TLR8-potentiating oligonucleotide, the immune response in the spleen increased three-fold compared to the agonist alone.

Level of TLR8-driven immune response (%): Gene expression levels of three TLR8-driven immune markers were normalised to the untreated group, and the mean value across all three biomarkers shown; Agonist: R848, a TLR7/8 agonist; Nox-oligo: a TLR8-potentiating oligonucleotide.

Having validated the activity of the TLR8-potentiating oligonucleotides in mouse and human systems, Noxopharm is currently scaling up to test these novel compounds in humanized TLR8 mice, and in various cancer models, in the months ahead.

Professor Seija Lehnardt is a group leader at the prestigious Charité - Universitätsmedizin Berlin, with extensive expertise in TLR7/8 biology. Commenting on the data generated, she said: "The Noxopharm results demonstrate that these short oligonucleotides possess the potential to significantly enhance the therapeutic efficacy of TLR8 sensing, both *in vitro* and *in vivo*, and I look forward to seeing how this progresses in the months ahead."

Noxopharm CEO Dr Olivier Laczka said: "We are very encouraged by these results and the potential of the Sofra platform in the cancer space. Our deep and novel understanding of how innate immune receptors such as TLR8 are naturally regulated provides a unique advantage in targeting them.

"Our immuno-oncology program is built on a robust foundation of molecular and mechanistic understanding, and is an excellent example of how we translate fundamental biology into new therapeutic opportunities. With our strong background in oncology and immune-modulating drug development, our data supports a new and different approach to addressing significant unmet needs in cancer treatment, paving the way for a potentially highly disruptive new treatment modality."

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About the Sofra technology platform

Developed from a breakthrough discovery in the immune system, Sofra comprises a novel class of drugs targeting inflammatory and autoimmune diseases, as well as enhancing RNA therapeutics and vaccines.

Sofra technology has potential applications in a wide range of diseases related to the immune system such as rheumatoid arthritis, lupus and diabetes, as well as other diseases like cancer.

The global autoimmune disease therapeutics market was worth US$163.2 billion in 2024 and is expected to reach US$219.6 billion by 2035, while the worldwide immuno-oncology market was US$43 billion in 2023 and is projected to hit US$284 billion by 2033.

The proprietary platform is based on short nucleic acid sequences, the building blocks of DNA or RNA, known as oligonucleotides. These act on specific immune sensors to regulate inflammation at its source, reducing or stimulating it to control the disease.

Further information and animations: SOF-SKN / SOF-VAC

About Noxopharm

Noxopharm Limited (ASX:NOX) is a clinical-stage Australian biotech company discovering and developing novel treatments for cancer and inflammation, including a pioneering technology to improve the safety profile of a wide range of mRNA medicines.

The company utilises specialist in-house capabilities and strategic partnerships with leading researchers to build a growing pipeline of new proprietary drugs based on two technology platforms – Sofra™ (inflammation, autoimmunity, mRNA drug enhancement, and oncology) and Chroma™ (oncology).

To learn more, please visit: noxopharm.com

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Noxopharm CEO Dr Olivier Laczka has approved the release of this document to the market on behalf of the Board of Directors.

Forward Looking Statements

This announcement may contain forward-looking statements. You can identify these statements by the fact they use words such as “aim”, “anticipate”, “assume”, “believe”, “continue”, “could”, “estimate”, “expect”, “intend”, “may”, “plan”, “predict”, “project”, “plan”, “should”, “target”, “will” or “would” or the negative of such terms or other similar expressions. Forward-looking statements are based on estimates, projections and assumptions made by Noxopharm about circumstances and events that have not yet taken place. Although Noxopharm believes the forward-looking statements to be reasonable, they are not certain. Forward-looking statements involve known and unknown risks, uncertainties and other factors that are in some cases beyond the Company’s control (including but not limited to the COVID-19 pandemic) that could cause the actual results, performance or achievements to differ materially from those expressed or implied by the forward-looking statement.