New preclinical data supports Noxopharm's immuno-oncology approach

Highlights

- **New preclinical data shows Noxopharm's Sofra™ technology can help immune cells respond to dying cancer cells**
- **Significant immune activation was observed when dying cancer cells were combined with TLR8-amplifying oligonucleotide**
- **Results build on earlier studies showing the technology can help expose otherwise 'hidden' RNA to the immune system**
- **Data supports the technology's potential to complement cancer treatments that kill tumour cells, including chemotherapy and radiotherapy**
- **Findings advance Noxopharm's oncology program towards *in vivo* proof-of-concept studies**

Sydney, 26 August 2026: Clinical-stage biotechnology company **Noxopharm Limited (ASX:NOX)** has generated new preclinical data demonstrating that its Sofra™ technology can help activate immune cells in response to dying cancer cells, providing further support for the technology's potential in immuno-oncology.

In the study, significant levels of immune activation were observed when Noxopharm's TLR8-amplifying oligonucleotide was combined with dying cancer cells. This was not observed when the oligonucleotide was absent.

The results build on earlier Noxopharm research showing the company's Sofra™ technology can help expose otherwise 'hidden' RNA to the immune system (see ASX announcement dated 4 August 2026). The latest study extends this work to whole cancer cell debris, more closely reflecting what occurs when cancer cells die.

This provides an important additional step in validating the Sofra approach for oncology and supports further development towards *in vivo* proof-of-concept studies.

When cancer cells die following treatments such as chemotherapy or radiotherapy, they release cellular material, including RNA, that could potentially alert the immune system. However, cancer-derived RNA can remain 'immune-silent', limiting the immune system's ability to recognise and respond to the tumour.

At a conceptual level, Noxopharm's technology aims to reveal the presence of cancer to the immune system. This approach is relevant to the growing field of cancer immunotherapy, which includes Merck's best-selling Keytruda immuno-oncology drug, currently being used in combination with a Moderna mRNA vaccine in a successful melanoma skin cancer trial.

Noxopharm CEO Dr Olivier Laczka said: "These results provide an important step forward for our oncology program. For the first time, we have shown that our technology can help immune cells respond directly to dying cancer cells.

"This supports the potential for our approach to complement cancer treatments such as chemotherapy and radiotherapy, while providing further validation of the broader Sofra platform as we progress towards *in vivo* proof-of-concept."

In the latest study, conducted with Hudson Institute of Medical Research, Noxopharm found that its Toll-like receptor 8 (TLR8)-amplifying Sofra oligonucleotide enabled immune cells to respond to dying cancer cells.

The study focused on macrophages, immune cells that naturally engulf and clear dying cells and their debris. TLR8 is an immune sensor within these cells that can help trigger a broader immune response when activated.

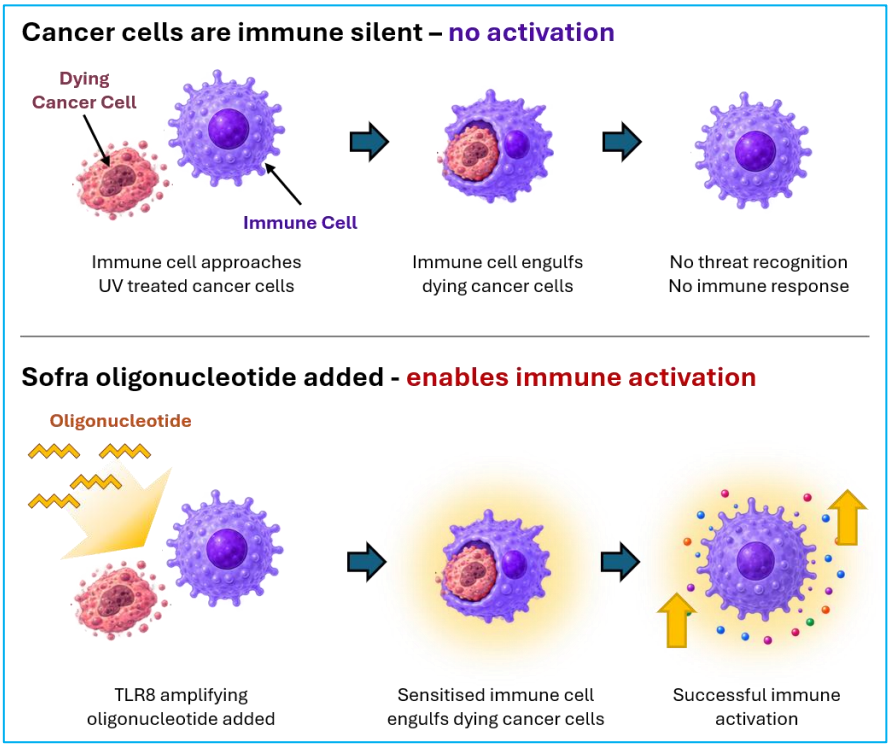
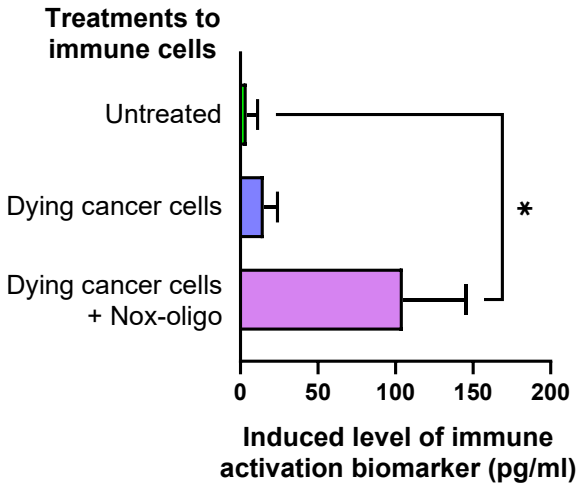


Figure 1 – Mechanism of action

Dying cancer cells alone did not trigger immune activation. However, when combined with Noxopharm's TLR8-amplifying oligonucleotide, the treatment elicited a significant immune response.

The data provides further evidence that Noxopharm's TLR8-amplifying oligonucleotides can enhance immune recognition of dying cancer cells, supporting their potential to complement treatments such as chemotherapy and radiotherapy.



Immune cells called macrophages, which naturally engulf and clear dying cells, were derived from the bone marrow of mice carrying human TLR8. Lab-grown human cervical cancer cells, known as HeLa cells, were exposed to UV light to induce cell death. The dying cancer cells were then fed to the macrophages, but this alone did not trigger an immune activation. Treatment with 1 µM of a TLR8-amplifying oligonucleotide elicited a strong immune response when combined with dying cancer cells, reaching 7-fold the level of the untreated group.

*Induced level of immune activation biomarker: The level of a TLR8-driven immune activation biomarker was measured, and the baseline level in the untreated group was subtracted to indicate the treatment-induced increase. Dying cancer cells: Cancer cells that had been exposed to UV light to induce cell death; Nox-oligo: a TLR8-amplifying oligonucleotide. Data graphed as Mean ± SEM (Standard Error of Mean); * p<0.05 by One-way ANOVA followed by Dunnett's test.*

Figure 2 – A Sofra™ oligonucleotide enables TLR8-driven immune activation in cancer cell-engulfing immune cells *ex vivo*

Professor Michael Gantier from Hudson Institute said: "These findings show that by sensitising TLR8 to the detection of RNA that would otherwise remain hidden, we can activate macrophages and potentially initiate an immune response targeted against cancer cell debris. We are now focused on demonstrating how this mechanism could translate into a powerful new approach for cancer treatment."

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

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About Noxopharm

Noxopharm Limited (ASX:NOX) is an Australian clinical-stage biotechnology company developing novel, targeted therapies for inflammation, autoimmune diseases and cancer.

Noxopharm's proprietary Sofra™ platform is designed to regulate innate immune signalling with greater precision. Its lead clinical asset, SOF-SKN™, is a topical therapy initially being developed for cutaneous lupus erythematosus, with Phase I completed and further clinical development progressing.

Beyond SOF-SKN, the Sofra platform supports a broader pipeline of internal and externally collaborated programs across inflammatory and autoimmune diseases, RNA therapeutics and oncology.

To learn more, please visit: noxopharm.com

About the Sofra technology platform

Developed from a breakthrough discovery in innate immunology, the Sofra technology platform represents a revolutionary approach to drug design by translating a new understanding of innate biology into targeted therapeutics that enable precision control of disease-relevant signalling.

Sofra is based on the use of synthetic nucleic acids, known as oligonucleotides, to mimic natural regulators of the body's defence system.

This novel approach enables selective and modular tuning of immune sensors, reducing or stimulating their associated biological responses to mitigate a broad range of diseases and enhance RNA-based therapies and emerging therapeutic technologies.

Sofra is focused on inflammatory and autoimmune diseases such as rheumatoid arthritis, lupus and diabetes, as well as immuno-oncology for cancer treatment. 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.

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

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Hudson Institute scientists research these major areas of medical need:

- Inflammation
- Cancer
- Women's and Newborn health

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