Sofra technology platform presentation

Sydney, 28 August 2025: Clinical-stage biotech company **Noxopharm Limited (ASX:NOX)** is pleased to provide a new presentation regarding the Sofra™ technology platform.

Key points:

- Technology platform overview
- Global autoimmune disease therapeutics market data
- Cutaneous lupus erythematosus (CLE) market and competitor landscape
- SOF-SKN advantages
- Numerous catalysts

-ENDS-

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 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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Dr Gisela Mautner, CEO and Managing Director of Noxopharm, has approved the release of this document to the market on behalf of the Board of Directors.

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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.

New Drugs Targeting Inflammation

NOXOPHARM

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SOF-SKN™ and SOF-VAC™ are currently not approved for use in Australia or any other country.


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Inflammation
is like a burning fire
in your body

Inflammation – a Global Killer

- Inflammation is central to many diseases.
- It causes untold harm to millions of people.
- Inflammatory diseases include **autoimmune diseases** such as rheumatoid arthritis, lupus and inflammatory bowel disease.
- Inflammation also occurs in **cardiovascular diseases** like atherosclerosis and high blood pressure, **respiratory diseases** like asthma, **neurodegenerative diseases** such as Alzheimer's and Parkinson's, **metabolic diseases** like diabetes, and **skin conditions** such as eczema, dermatitis and psoriasis.
- ***Any technology that can reduce the damage caused by inflammation has significant commercial potential.***

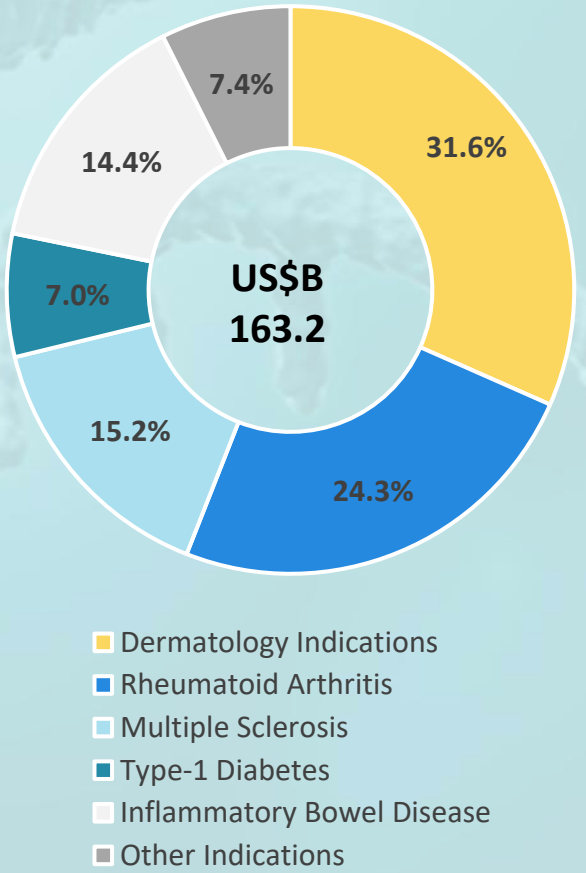
Global Autoimmune Disease Therapeutics Market

Market Overview

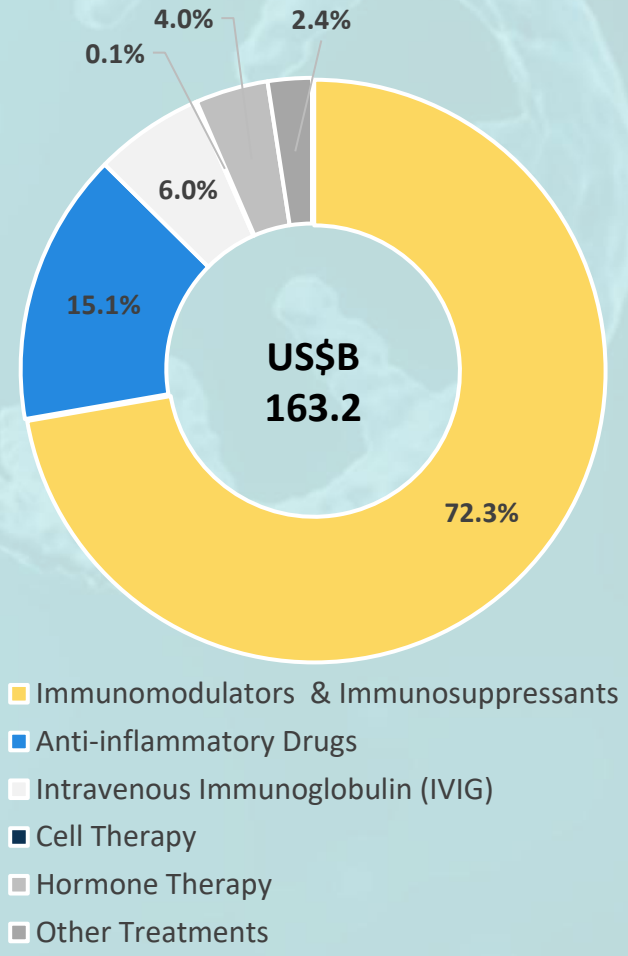
- **Global autoimmune disease therapeutics market size – US$ 163.2 billion** (2024):
  - **CAGR of 3%** (2024–2034).
  - Projected revenue of **US$ 219.6 billion** (2034).
- **Dermatology indications** – market share of **31.6%** in 2024 and CAGR of **2.8%.**
- **Immunomodulators** and immunosuppressants - highest market share of **72.3%** (2024).
- **North America** – market share of **33.3%** (2024) in the global autoimmune disease therapeutics market; **11.4% S Asia and Pacific.**

Global Autoimmune Disease Therapeutics Market Value Share

By Indications (2024)



By Treatment (2024)

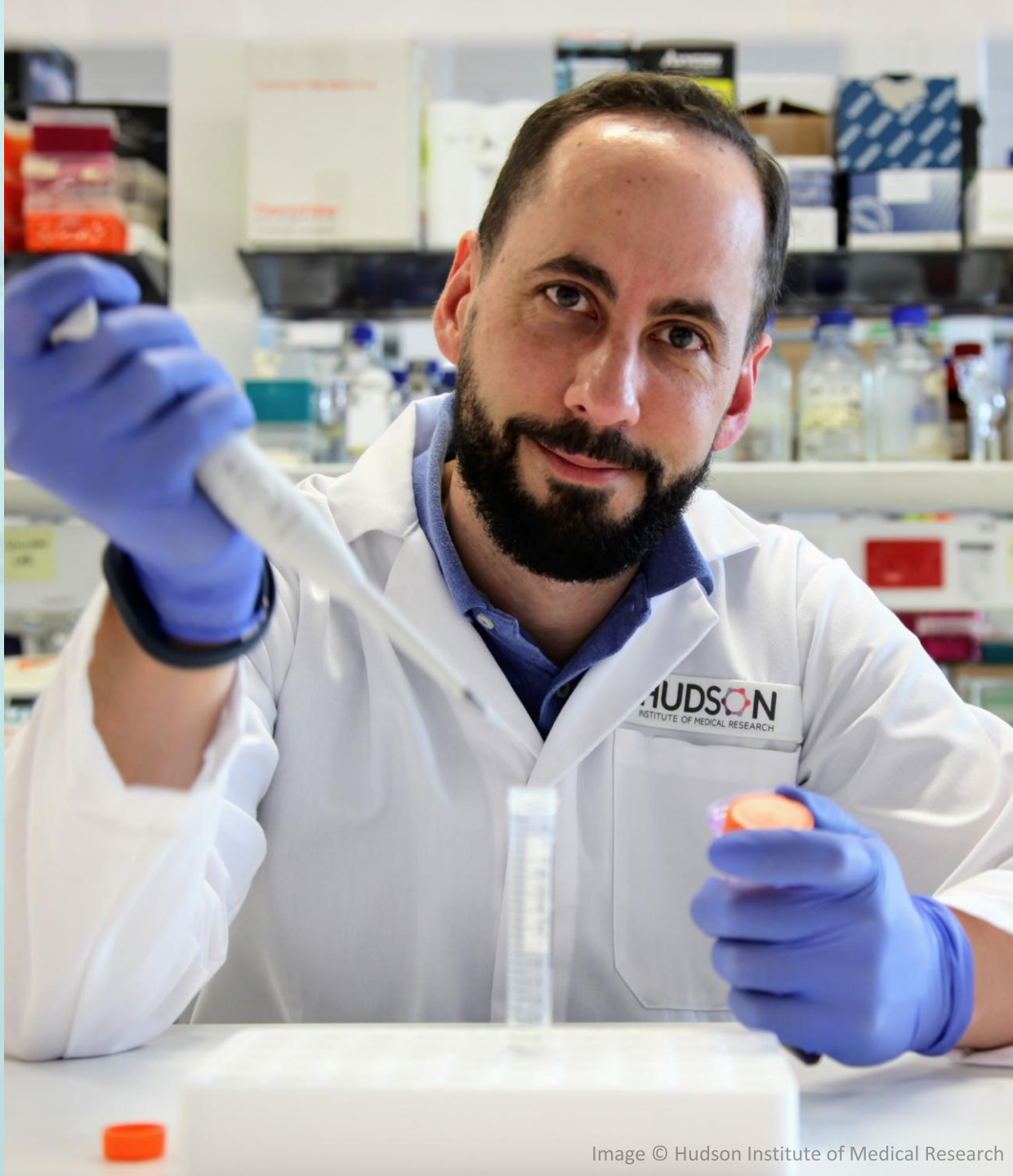


Source: FMI Analysis, 2024


NOXOPHARM
Sofra™
A breakthrough discovery

A Breakthrough Discovery

- Noxopharm has a strategic partnership with Hudson Institute of Medical Research, a leading Australian medical research organisation.
- The collaboration is founded on a discovery made by Hudson's Associate Professor Michael Gantier, an **expert in nucleic acids biology**, and an international team of researchers.
- He uncovered why some people develop autoimmune diseases and others do not.
- This revealed how specific immune sensors like TLR7/8 are activated and deactivated.
- The discovery became the foundation of Noxopharm's **Sofra™ technology platform**.
- ***We can now create novel leading-edge drugs intended to restore the balance to a misfiring immune system.***



Sofra Technology Platform

- Sofra is based upon short nucleic acid sequences, the building blocks of DNA or RNA, known as oligonucleotides (short oligos).
- These oligos, which we have modified to act on specific immune sensors in a novel way, **reduce inflammation at its source**.
- They have a wide variety of potential applications.
- Intellectual property protected with PCT applications filed in all major jurisdictions.
- From its large Sofra library, Noxopharm has already developed:
  - **SOF-SKN™** – a drug candidate for autoimmune diseases affecting the skin.
  - **SOF-VAC™** – a portfolio of oligos designed to limit the inflammatory side effects associated with RNA therapeutics and vaccines.
- ***There are numerous assets that can be developed in the future based on the Sofra platform to target various inflammatory diseases.***

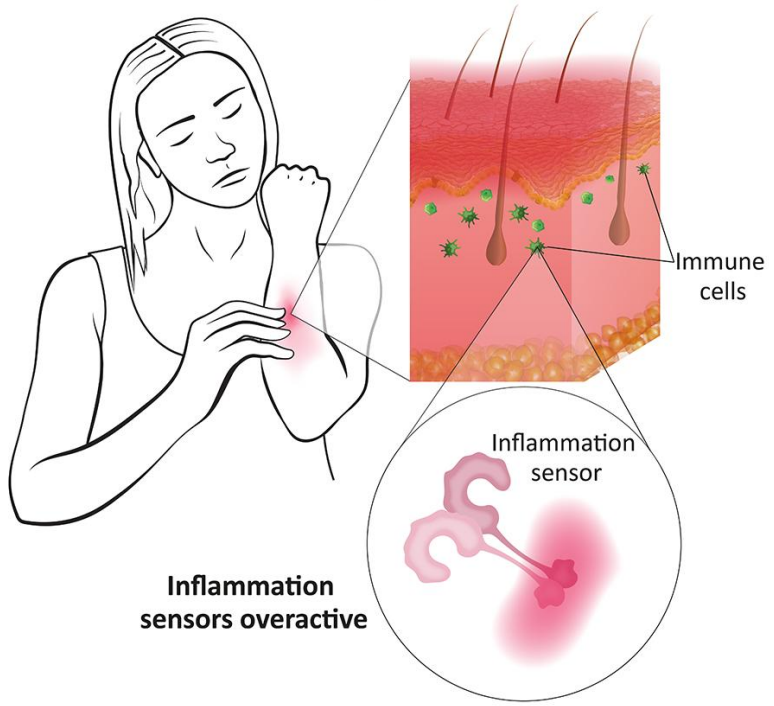
SOF-SKN

A new way of treating autoimmune skin diseases

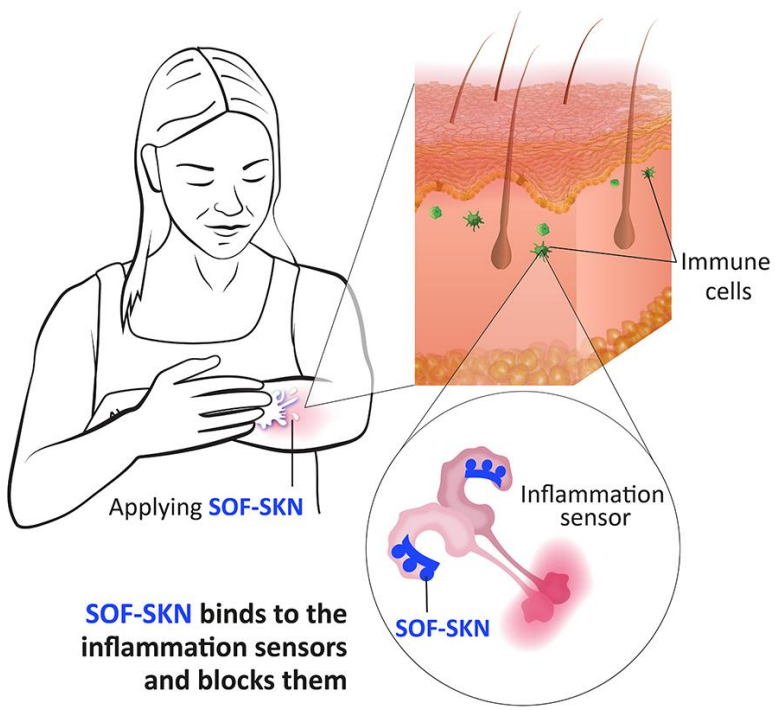
SOF-SKN – A Novel Drug Candidate for Lupus

- Skin diseases are distressing to patients, especially when they visibly affect the face and limbs.
- Cutaneous lupus is a disease with **high unmet need**.
- **Current treatments are inadequate** – corticosteroids are commonly used but can have severe side effects.
- To help patients and capitalise on a market opportunity, we have developed an oligonucleotide-based topical skin medication known as SOF-SKN.
- **5 million people worldwide** have some form of lupus, with incidence and prevalence rates on the rise.
- ***Focusing on lupus is the first step to de-risking the technology and demonstrating its clinical potential. Larger markets will be targeted in the future.***

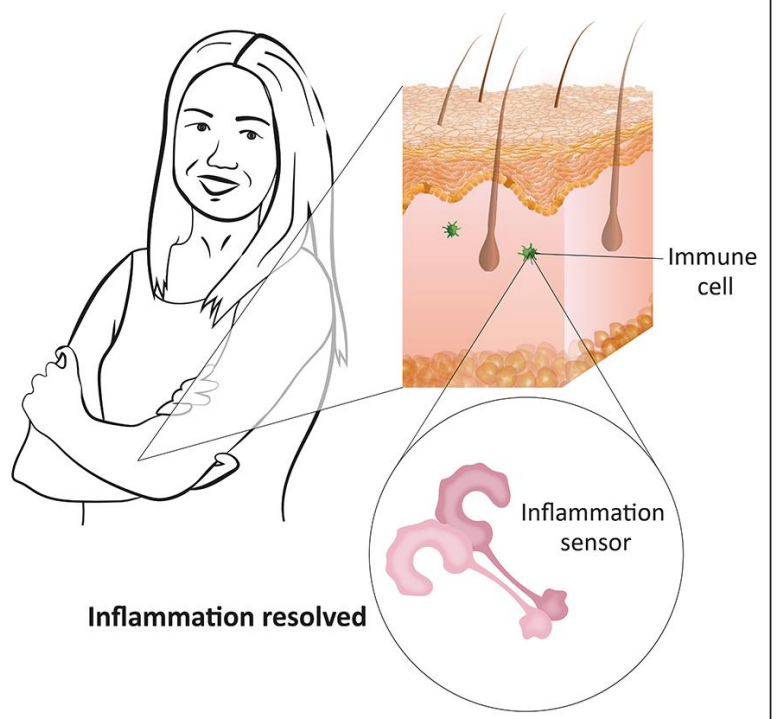
SOF-SKN Mechanism of Action



In the skin, different types of immune cells contain inflammation sensors. In inflamed skin, these sensors are overactivated.

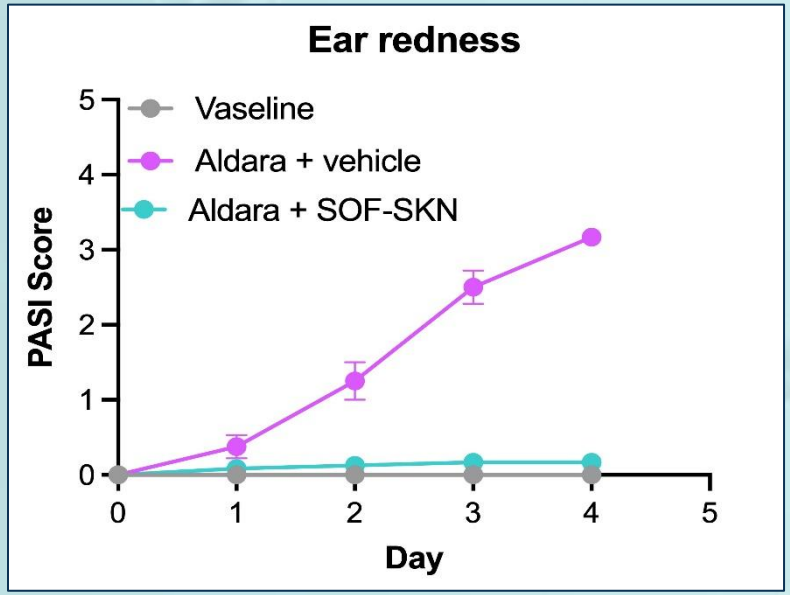


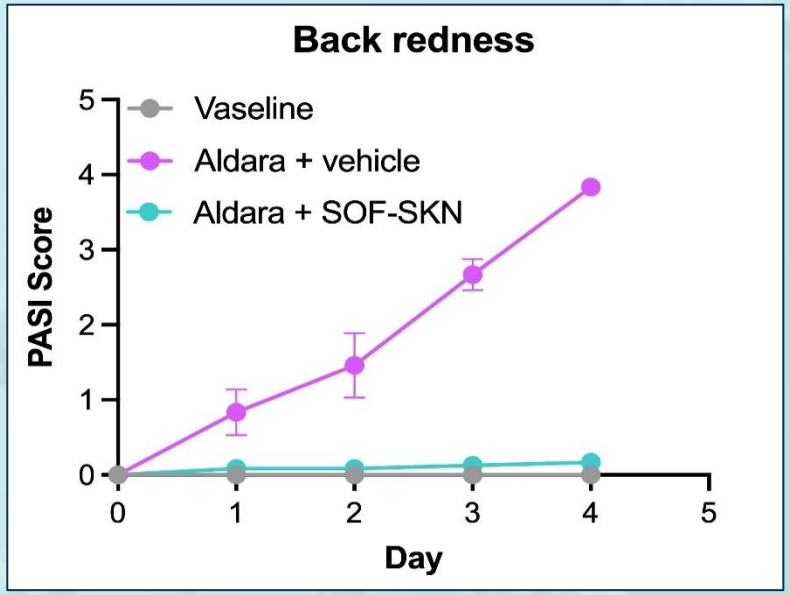
When **SOF-SKN** is applied, the inflammation sensors are blocked and the skin begins to improve.

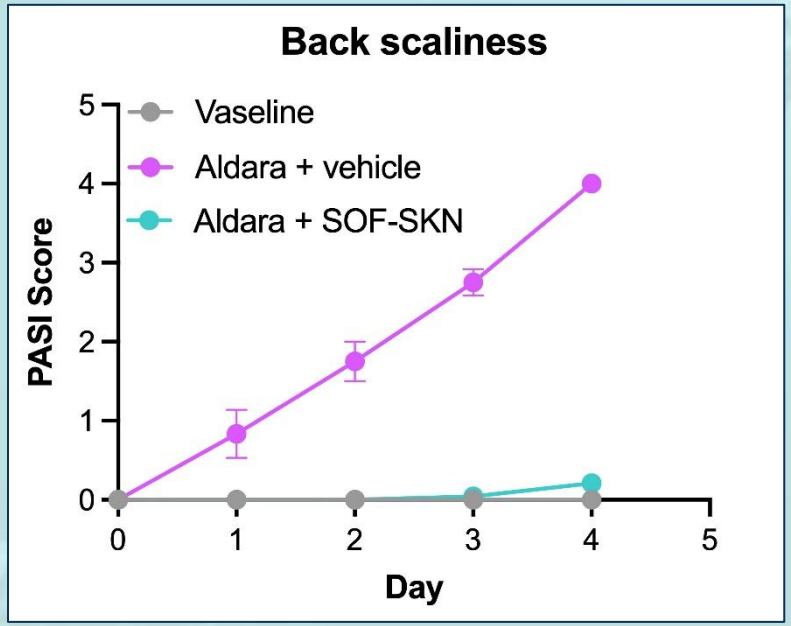


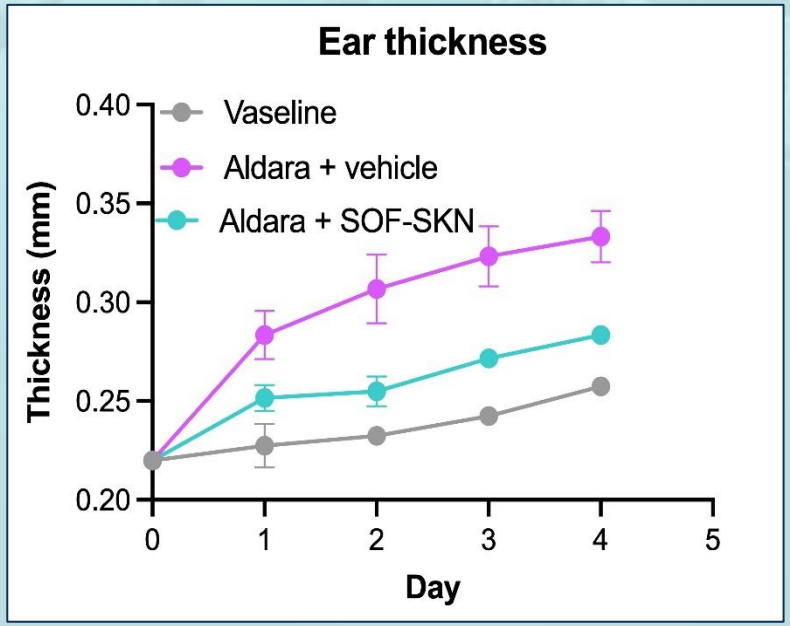
Inflammation is resolved and the skin returns to normal.

SOF-SKN Reduces Skin Inflammation – *in vivo*









A well-established model of TLR7-driven skin inflammation was used in applying Aldara® cream containing 5% imiquimod (a TLR7 agonist) topically to the back and ear of mice.

SOF-SKN was also applied to the same areas.

Mice were scored daily for the appearance and severity of skin inflammation.

HERACLES Clinical Trial

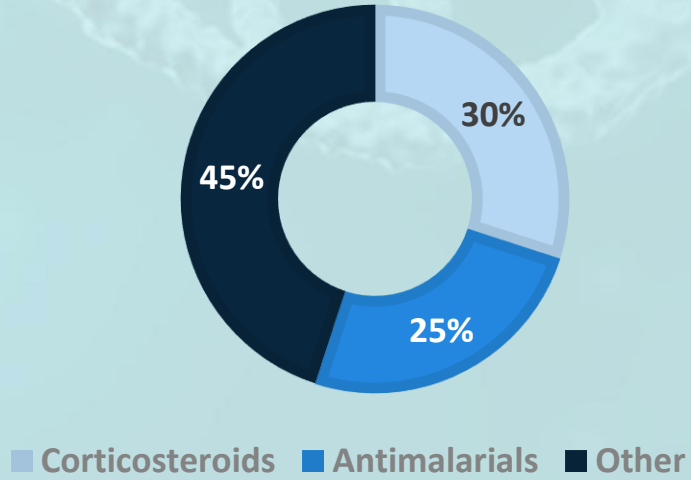
- First-in-human trial for SOF-SKN is now taking place.
- It aims to provide initial safety and pharmacokinetic data from healthy volunteers.
- HERACLES stands for ‘Harnessing Endogenous Regulators Against CLE Study’.
- It is being **hosted in Australia** to capitalise on local expertise in lupus research and early phase clinical trials.
- Ethics approval received in May 2025.
- **Trial activities started in June 2025.**
- Several doses are being tested.
- ***The trial was designed to be easily implemented and is expected to proceed rapidly.***
- ***Results are being announced in a timely manner.***

Total Addressable Market & Competitor Landscape

Indication	Total Addressable Market (US$ Billion)	Competition
Cutaneous lupus erythematosus (CLE)	• **$3.38** (*2024*) • **$10.53** (*2033*) • *CAGR **13.46%***	Only 2 drugs approved for only 1 subset of CLE: **1. Kenalog-10** (corticosteroid) **2. Plaquenil** (antimalarial)

For the treatment of CLE, use of generic, unspecific and systemic lupus drugs is common (corticosteroids, immune suppressing drugs, anti-histamines, others).

Market Share by Treatment Type



Why TLR7/8 Inhibition?

- Drugs that **directly target *innate* immune sensors** are a relatively recent development resulting from extensive scientific progress.
- Innate immune sensors are part of the body's first line of defence and initiate the immune response by triggering a cascade of complex immune reactions.
- Rather than trying to halt inflammation when the process has already progressed along multiple steps, SOF-SKN can stop it right at the beginning.
    - This marks a **significant shift in immunotherapy** beyond the *adaptive* immune system drugs that target T-cells, for example.
- Hudson Institute is at the **forefront of this science**.
- SOF-SKN is being developed as a **first-in-class drug**:
    - First TLR7/8 targeted topical treatment and oligonucleotide-based TLR7/8 antagonist.
- Major pharma companies are also exploring this exciting new field.

Major Companies Exploring TLR7/8 Antagonism – An Attractive and Validated Target

Several major companies see TLR 7/8 antagonism as an attractive market opportunity for systemic (SLE) and cutaneous (CLE) lupus.

Modality	Company	Compound*	Target	Route of Administration	Stage	Indication
Small Molecule	Merck	M5049 (Enpatoran)	TLR7/8 antagonist	Oral	Phase 2	SLE/CLE COVID-19 pneumonia dermatomyositis and polymyositis
Small Molecule	BMS	BMS-986256 (Afimetoran)	TLR7/8 antagonist	Oral	Phase 2	SLE/CLE
Small Molecule	Novartis	MHV370	TLR7/8 antagonist	Oral	Phase 1	Undisclosed
Antibody	Daiichi Sankyo	DS-7011a	TLR7 antagonist	IV/SC (IV for Phase 2)	Phase 2	SLE/CLE

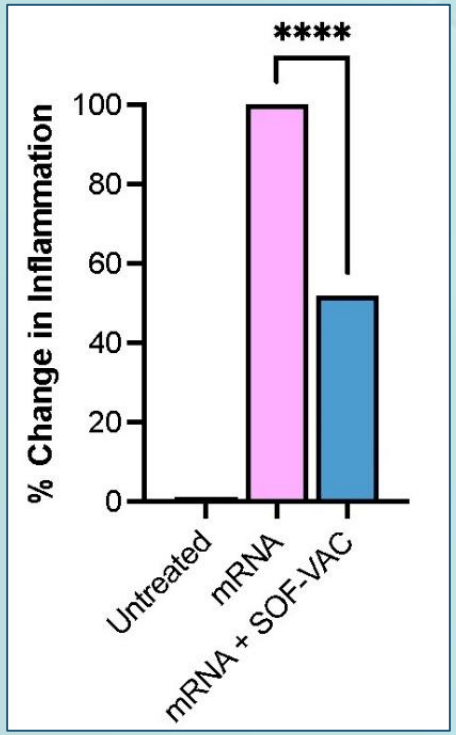
SOF-SKN Advantages

- **Fast relief** – SOF-SKN is directly applied to the skin lesions where the immune cells that express TLR7/8 immune sensors are overactivated.
    - It therefore **reaches the source of the inflammation** directly without having to pass through the stomach or circulatory system.
- **Patient compliance** – Topical applications are, in general, **preferred by patients** for skin diseases.
- **Ease of treatment** – Cream can be applied to individual lesions and the dose adjusted easily, with no exposure of drug to whole body.
- **Reduced risk of immunosuppression** – Avoids systemic TLR7/8 inhibition.
- **Versatility** – Potential for treatment of flare-ups as well as ongoing disease management.
- **Targeted** – SOF-SKN has the potential to mitigate off-target effects and associated side effects.

SOF-VAC

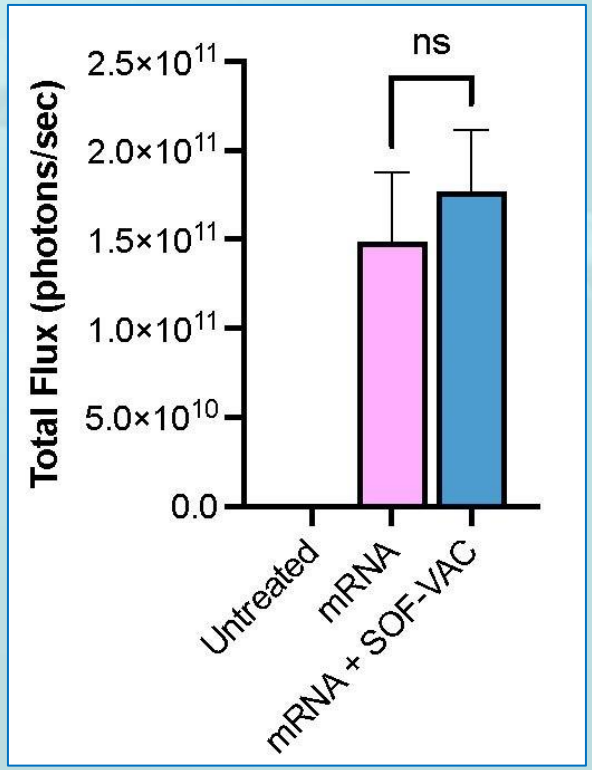
An asset portfolio attracting commercial interest

SOF-VAC Reduces Inflammation



- In an animal study, inflammation was reduced by around 50% when comparing the inflammation induced by mRNA alone to mRNA plus SOF-VAC.
- This is an important finding, as many side effects of mRNA vaccines are due to inflammation.

Compounded average percentage showing highly significant decrease in levels of nine inflammatory cytokines ($p<0.001$) detected in the blood of mice six hours post-injection with mRNA alone or mRNA co-packaged with SOF-VAC.



- Since mRNA expression is directly correlated with vaccine activity, i.e. the immunity induced by vaccination, it was critical to show that SOF-VAC did not reduce mRNA translation.

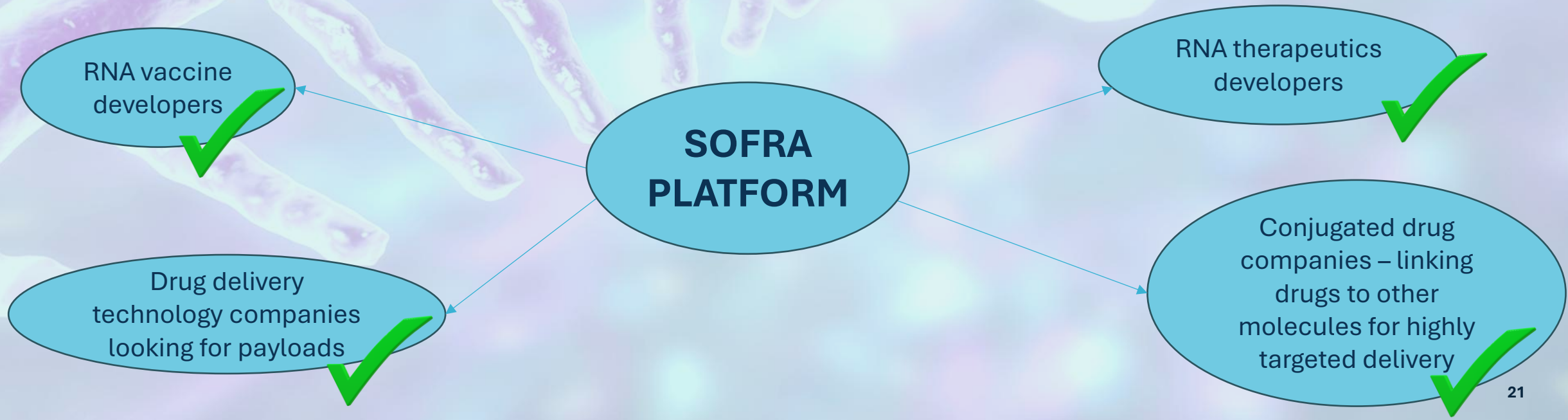
Measurement of mRNA expression (bioluminescence) in mice six hours post-injection with luciferase mRNA alone or mRNA co-packaged with SOF-VAC showed no significant difference.

SOF-VAC Commercialisation

- Noxopharm has developed an **extensive portfolio of assets** under the SOF-VAC program.
- These include an array of oligos targeting various nucleic acid (RNA / DNA) inflammation sensors such as TLR7, TLR8, RIG-I and cGAS.
- The program is also being extended to modulate other critical sensors, with promising leads for targets such as MDA5, TLR3 and TLR9.
- **A range of mid-size to multibillion-dollar companies are now evaluating these assets**.
- Success stories: Collaborations with BioRay and Tezcat:
  - Promising Sofra results from overseas company.pdf
  - US company demonstrates strong Sofra potential.pdf
- Most company names remain confidential in a highly competitive market.
- ***Noxopharm is actively pursuing further third-party collaborations.***

Potential Partners – Signed MTAs

- Several Material Transfer Agreements (MTAs) signed over the past year.
  - An MTA governs the transfer of materials between two parties, defining the terms of the arrangements, materials being shared and type of experiments performed.
  - BioRay and Tezcat MTAs previously announced.
- **An MTA is an essential step along the path to commercialisation of preclinical assets.**
- Each company is investing its own time and resources to perform the studies.
- A variety of use cases are being explored.



Cancer Opportunity

- Inflammation – or rather the absence of it – plays a recognised role in cancer.
- Noxopharm has developed drug candidates that can help **stimulate the immune system** as it battles cancer.
- Sofra could therefore attract interest in the sizeable **global immuno-oncology market**, which was worth **US$ 69.8 billion** in 2025.
- Decision to fast-track research program for 2025.
- **Lead candidate already identified**, currently being optimised.
- IP protection filed for this concept.
- ***This expansion into cancer further broadens the Sofra pipeline and opens up intriguing market opportunities.***

Catalysts – Increasing Value with every Step

Near term - 2H25 - 1H26

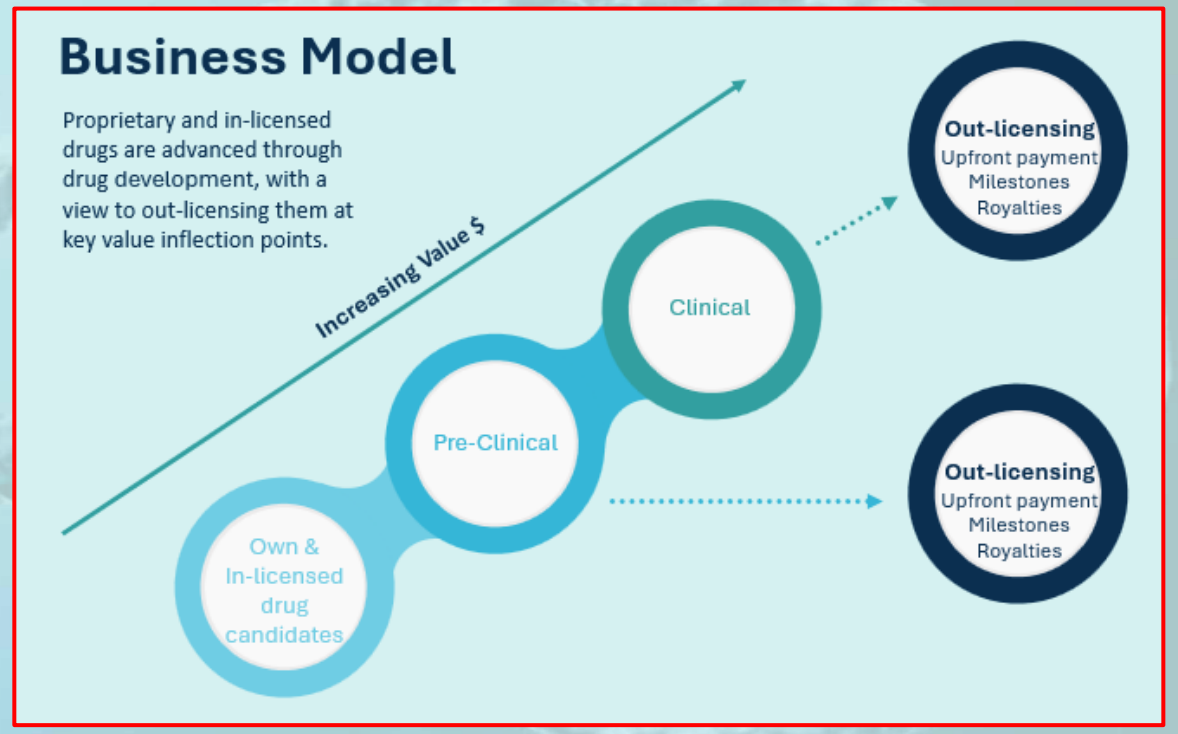
- HERACLES safety results – single dose in humans
- HERACLES safety results – multiple doses in humans
- Regulatory required human SOF-SKN data for next trial
- New MTAs and follow-on MTAs (first step for potential commercial deal)
- New IND-enabling preclinical data
- First tier-one patent granted
- High-impact journal publication of Sofra discovery
- New cancer data from pipeline (lead optimisation)

Medium term – 2H26-2H27

- Next stage clinical trial for SOF-SKN efficacy data
- Pre-meeting with US FDA for Investigational New Drug application
- Cancer-related external collaborations

Long term – 1H28 – 1H30

- First exit event – out-licensing of SOF-SKN to pharma
- Several assets in clinical trials
- Rich pipeline to support ongoing growth and value creation



Strategy to develop and sell de-risked assets when attractive to other companies.

No intention to pursue expensive and lengthy Phase III trials and regulatory approval processes.

All dates are estimates and subject to change.

Summary

- Novel technology to tackle inflammation.
- Breakthrough discovery backed by robust IP portfolio.
- Substantial global markets for autoimmune and inflammatory diseases.
- Ongoing external interest.
- Clinical trial to demonstrate and de-risk technology.
- Expansion into cancer treatments.
- Promising pipeline with numerous potential assets.
- Sofra – One platform with multiple paths to commercialisation.