ASX Announcement | 7 December 2020
Noxopharm Limited (ASX:NOX)

Pre-Clinical Breakthrough Discovery Set to Expand Noxopharm Pipeline

Highlights:

- **Important discovery set to strengthen and expand the Noxopharm drug discovery program**
- **Opens way to the design of more potent chemotherapies**
- **First drug candidates created with potent activity against pancreatic and gallbladder cancer cells**
- **Set to join Veyonda® in an important new generation of anti-cancer drugs**

Sydney 7 December 2020: Australian clinical-stage drug development company Noxopharm Limited (ASX:NOX) is pleased to announce what it regards as a major breakthrough in anti-cancer drug discovery.

Noxopharm scientists have identified a new series of small molecules that are highly active against hard-to-treat cancer types such as the grouping of pancreatic, gallbladder and liver cancers. Equally importantly, this new series of compounds demonstrates substantial resistance to Phase 2 metabolism, a process designed to clear drugs from the body, but which can lead to considerable loss of anti-cancer function and has served to this time as a major barrier to the development of this class of anti-cancer drug.

The identification of this new series leverages knowledge from the Company's drug development platform including its frontline drug candidate, Veyonda®. This new series complements the Veyonda program and is set to expand the Company's drug development pipeline, helping to elevate the Company's profile internationally.

Graham Kelly PhD, Noxopharm CEO, said, "I have led teams involved in anti-cancer drug development for 25 years, and I regard this discovery as a major breakthrough, confirming the exceptional talent we have in this Company. The trigger for today's announcement is recent confirmation that the discovery has led to the creation of molecules capable of killing chemo-resistant pancreatic and gallbladder cancer cells, while remaining protected from Phase 2 metabolism. That dual effect of creating a drug with potent anti-cancer function at the same time as protecting against loss of that potency once in the body is what is so exciting after so many years of research.

I challenged our scientists to start with pancreatic and gallbladder cancers, two of the least responsive cancers to chemotherapy. They responded with a handful of molecules that are the

most active I have seen in this class. We are close to selecting the best of these, at which time it will join our drug pipeline behind our primary asset, Veyonda, creating additional opportunity and value for the Company."

Dr Olivier Laczka, Noxopharm Director of Drug Discovery and Research, and Dr Daniel Wenholz, Noxopharm Director of Pharmaceutical Chemistry, are responsible for this discovery.

Clinical need

Pancreatic carcinoma and cholangiocarcinoma (gallbladder cancer) remain among the cancers with the poorest outlooks, with 5-year survival rates of about 9% and 10-15% respectively.[1,2]

Gemcitabine is the standard chemotherapy used in both cancers. However, due to poor bioavailability, it requires administration in large doses by infusion and this results in significant toxicity for the patient, effectively limiting its clinical benefit.

A more effective, safer treatment urgently is needed for both cancers. The compounds now discovered by Noxopharm have proven to be potent killers in the laboratory of pancreatic and gallbladder cancer cells. Combined with the ability to resist Phase 2 metabolism, this suggests a highly promising opportunity to make an important difference to an area of considerable need.

Details and implications of the discovery

(i) **Rationale.** Phase 2 metabolism involves the attachment of a sugar to the molecule, substantially changing the overall size and shape of the molecule. That change results in the molecule losing its ability to bind to its target on the cancer cell. The new series of compounds was developed to retard the Phase 2 process in order to retain anti-cancer function longer

(ii) **Discovery steps**. The Company successfully applied this discovery to molecules being developed in-house to treat cancers of the pancreas and gallbladder. Six months of repeat design and testing by QSAR has yielded a family of molecules that successfully retard Phase 2 metabolism while displaying potent killing action on pancreatic and gallbladder cancer cells in the laboratory

(iii) **Next steps/timing**. The Company anticipates identifying its lead candidate within a matter of weeks. That compound then will enter the pre-clinical testing phase expected to last about 15 months and involve standard pre-clinical safety and efficacy studies. A first-in-human pharmacokinetic study is expected to be undertaken in Australia in about mid-2022

(iv) **IP**. Preparation of a provisional patent application covering the newly identified series of molecules has commenced

(v) **Implications for shareholders**. The Company constantly seeks to maximise the value of its core intellectual property which is a drug development platform of considerable intrinsic value capable of developing a pipeline of novel drug candidates, all contributing to the overall value and global profile of Noxopharm.

Reminder

Tomorrow, **Tuesday 8 December 2020 at 2PM**, Noxopharm CEO, Dr Graham Kelly will provide an updated overview of the Company's recent corporate and R&D activities, proposed use of the

$23 million funds recently raised, and the Company's plans and expectations for 2021. A recording of the webinar will be made available on the Noxopharm website later this week.

Date and Time: Tuesday 8 December, 2020 at 2pm AEDT

Attendees will need to pre-register via the following link:

Noxopharm Investor Webinar 8 December 2020 at 2pm AEDT

References

1. Rawla P (2019). Epidemiology of pancreatic cancer: global trends, etiology and risk factors. World J Oncol10, 10-27. Doi: 10.14740/wjon1166
2. American Cancer Society. https://www.cancer.org/cancer/pancreatic-cancer/detection-diagnosis-staging/survival-rates.html

Graham Kelly, 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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About Noxopharm
Noxopharm Limited (ASX:NOX) is an Australian clinical-stage drug development company focused on the treatment of cancer and septic shock.

Veyonda® is the Company's first pipe-line drug candidate currently in Phase 2 clinical trialling. Veyonda® has two main drug actions – inhibition of sphingosine kinase and inhibition of STING signalling. Activity against the former target contributes to its dual-acting oncotoxic and immuno-oncology functions designed to enhance the effectiveness and safety of standard oncology treatments, i.e., chemotherapies, radiotherapy and immune checkpoint inhibitors. Activity against the latter target provides an anti-inflammatory effect, also contributing to an anti-cancer action, but also potentially blocking sepsis.

Noxopharm also is the major shareholder of US biotechnology company Nyrada Inc (ASX:NYR).

To learn more, please visit: noxopharm.com

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