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Sydney, Australia

Nyrada’s Lead Drug Candidate Demonstrates Significant Cardioprotection

Highlights:

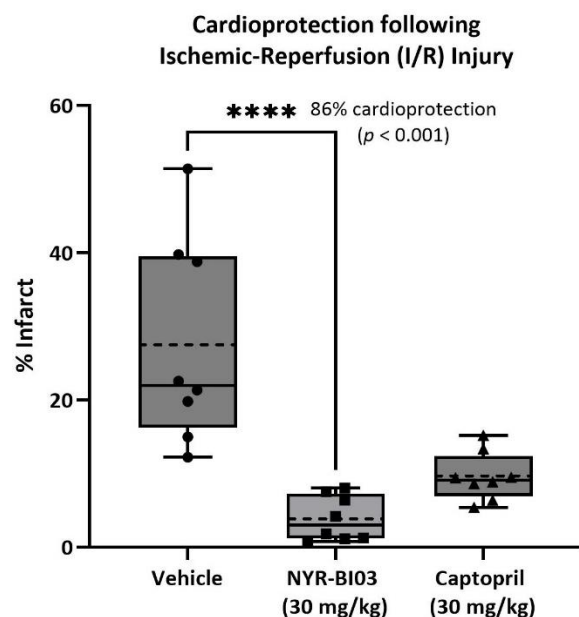
- Preclinical rat study demonstrated Nyrada’s lead drug candidate NYR-BI03 has strong efficacy limiting cardiovascular damage associated with coronary heart disease, conferring 86 percent cardioprotection following myocardial ischemia-reperfusion injury.
- NYR-BI03 demonstrated superior efficacy in this study compared to Captopril, an FDA-approved therapy.
- Broadens potential therapeutic application of NYR-BI03 to include coronary heart disease.
- Global market for myocardial infarction therapies is anticipated to reach US\$3.7 billion by 2032 offering an additional and significant market opportunity for Nyrada.
- Nyrada is pioneering Transient Receptor Potential Canonical (TRPC) channel-blocking therapies and NYR-BI03 is first-in-class with a novel mechanism of action.
- Phase I clinical trial for NYR-BI03 scheduled to commence in 2QFY2025.

Nyrada Inc (ASX:NYR) (“Nyrada or “Company”), a drug development company specialising in novel small molecule therapeutics today announces positive results from a preclinical rat study evaluating the efficacy of its lead drug candidate NYR-BI03 in coronary heart disease, an additional therapeutic opportunity.

The study demonstrated NYR-BI03 strong efficacy in limiting cardiovascular damage following acute myocardial ischemic-reperfusion injury.

Ischemic-reperfusion injury is a leading cause of tissue damage following the restoration of blood flow to the heart post-injury.

NYR-BI03 demonstrated strong and statistically significant cardioprotection following a myocardial infarction by reducing cardiac tissue damage by 86 percent (p value < 0.001, $n=8$ per group).



Nyrada is currently developing NYR-BI03, a first-in-class neuroprotection treatment for both stroke and traumatic brain injury (TBI). In February 2024, the Company reported preclinical stroke study [results](#) showing NYR-BI03 provided a statistically significant level of neuroprotection, rescuing 42% of brain injury in the penumbra region in treated animals.

[Published research](#) has shown that blocking TRPC channel activity also significantly protects cardiac tissue from ischemic reperfusion injury. One of the primary drivers of heart damage in cardiovascular disease is the activation of calcium (Ca^{2+}) ion channels, specifically TRPC3, TRPC6, and TRPC7 which mediate cardiac cell injury during coronary events. NYR-BI03 has been specifically designed to block these channels.

Nyrada commissioned a rat study in a model of acute myocardial ischemia-reperfusion injury to assess the cardioprotective efficacy of NYR-BI03. The results demonstrated strong cardioprotection that was superior to Captopril, an FDA-approved ACE inhibitor commonly administered following ischemic events and used in this study as a positive control. This positions NYR-BI03 as a novel cardioprotective treatment following myocardial infarction.

Myocardial infarction is a leading cause of morbidity and mortality worldwide, with a global market for treatments anticipated to grow at a [CAGR of 6.8 percent and reach US\\$3.7 billion by 2032](#).

Nyrada CEO James Bonnar commented: “This is an exciting development for Nyrada, presenting additional therapeutic and commercial options for our lead drug candidate NYR-BI03.

“The cardiovascular study results announced today leverages Nyrada’s TRPC knowledge and expertise. The preclinical Good Laboratory Practice (GLP) package being assembled for our brain injury program can also be utilised to support clinical development in this indication.

“Nyrada continues to pioneer the development of TRPC channel blocking therapies.”

NYR-BI03 is currently undergoing GLP safety and tolerability studies ahead of a first-in-human Phase I clinical trial expected to commence in the quarter ending December 2024. Thus far, six out of nine GLP studies have been completed.

Subject to satisfactory completion of this Phase I trial, NYR-BI03 has the potential to progress directly to Phase II trials to assess its efficacy in stroke, traumatic brain injury, and now myocardial ischemia-reperfusion injury.

Nyrada has also very recently submitted patent protection applications for its TRPC channel-blocking therapies, including for brain injury and coronary heart disease.

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About Nyrada Inc

Nyrada is a drug discovery and development company specialising in novel small-molecule therapies. The Company has two main programs, each targeting market sectors of significant size and considerable unmet clinical need. Nyrada Inc. ARBN 625 401 818 is a company incorporated in the state of Delaware, US, and the liability of its stockholders is limited.

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