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Sydney, Australia

CSANZ26 Conference Poster

Nyrada Inc (ASX:NYR), a clinical-stage biotechnology company focused on developing Transient Receptor Potential Canonical (TRPC) ion channel inhibitors to treat a range of medical conditions, is pleased to provide a copy of a conference poster to be presented at the 74th Annual Scientific Meeting of the Cardiac Society of Australia and New Zealand (CSANZ26).

Nyrada's Director of Research and Development, Dr Jasneet Parmar, will be presenting at CSANZ 2026 to be held in Sydney from 6 to 9 August 2026. The poster presents preclinical data showing that Xolatryp® provided significant cardioprotection in two studies using a rat model of myocardial ischemia-reperfusion injury. The data from these studies show Xolatryp preserved myocardial structure and function while reducing ventricular arrhythmias following acute myocardial ischemia. Xolatryp is a small-molecule inhibitor of TRPC3/6/7 channels designed to limit excessive calcium entry related to multiple disease pathologies.

[A Phase I clinical trial to assess the safety, tolerability, and pharmacokinetics has been successfully completed](#) and a [Phase IIa clinical trial](#) has commenced to assess the safety and preliminary efficacy of Xolatryp in reducing cardiac reperfusion injury in patients with ST-Elevation Myocardial Infarction (STEMI) undergoing PCI.



Key Links:

Latest Corporate Presentation - <https://bit.ly/4v0QgXE>

Foundation Studies

- GLP study results – <https://bit.ly/4d8VYkX>
- Phase I trial results – <https://bit.ly/3Nt0GzH>

Cardiac Studies

- Phase IIa PROTECT-MI website - <https://www.protect-mi.com>
- Phase IIa study fact sheet – <https://bit.ly/4bcDLKj>
- Preclinical cardioprotection study 1a - <https://bit.ly/4sigwMZ>
- Preclinical cardioprotection study 1b - <https://bit.ly/4rmOsXn>
- Preclinical cardioprotection study 2 - <https://bit.ly/40iHpUg>

Oncology Studies

- Preclinical anti-tumour study - <https://bit.ly/49rWOa0>
- Preclinical cardioprotection pilot study - <https://bit.ly/3QS1VKm>

Stroke Study

- Preclinical stroke study - <https://bit.ly/4sygHmH>

TBI Study

- Preclinical TBI study - <https://bit.ly/40fhrRT>

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About Nyrada Inc.

Nyrada Inc. is a clinical-stage biotechnology company focused on the discovery and development of innovative small-molecule therapies, specifically targeting Transient Receptor Potential Canonical (TRPC) ion channels. The company's lead candidate, Xolatryp®, has shown efficacy in preclinical cardioprotection, neuroprotection, and oncology models and has completed a first-in-human Phase I clinical trial. A Phase IIa clinical trial has commenced to assess the safety and preliminary efficacy of Xolatryp in reducing cardiac reperfusion injury in patients with ST-Elevation Myocardial Infarction (STEMI) undergoing PCI. Nyrada Inc. (ARBN 625 401 818) is incorporated in Delaware, US, with limited liability for its stockholders.

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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 Nyrada about circumstances and events that have not yet taken place. Although Nyrada 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.

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Xolatryp® - a Gαq-Coupled TRPC Channel Antagonist Attenuates Myocardial Reperfusion Injury and Malignant Arrhythmias in Rat MI Models

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Background

- Primary percutaneous coronary intervention (PCI) restores coronary blood flow following ST-elevation myocardial infarction (STEMI), but reperfusion itself initiates secondary myocardial injury that contributes to infarct expansion, ventricular dysfunction and malignant arrhythmias.
- Pathological activation of Gαq-coupled receptor signalling during reperfusion stimulates TRPC3/6/7 channels, promoting excessive intracellular Ca²⁺ influx, mitochondrial dysfunction, oxidative stress and cardiomyocyte death.
- Xolatryp® is a potent, selective antagonist of TRPC3, TRPC6 and TRPC7 that targets this upstream calcium signalling pathway to preserve myocardial viability while maintaining physiological cardiac function.
- This study evaluated whether pharmacological inhibition of TRPC3/6/7 with Xolatryp reduces myocardial reperfusion injury and improves structural, functional and electrophysiological outcomes in rat models of acute myocardial infarction

TRPC ion channel signalling pathway

Cardiac Cell	TRPC Activation	Potential Xolatryp Effect
Cardiomyocytes	Cell injury	Preserved function
Endothelial cells	Endothelial dysfunction	Improves perfusion
Fibroblasts	Fibrosis	Limits remodelling

Target engagement – Xolatryp inhibits human TRPC channels

Dose-response inhibition of calcium influx in HEK-293 cells

Xolatryp inhibits human TRPC3, TRPC6, TRPC7 channels in a concentration-dependent manner

Experimental Design

Generic experimental paradigm for rat myocardial ischaemia-reperfusion studies

Study A - Proof of Biology

Continuous IV Administration of Xolatryp Preserves Myocardial Structure and Function Following Acute Myocardial Ischaemia

Study Overview - Rat Myocardial Ischaemia-Reperfusion Model

Study Details

- Male Sprague-Dawley Rats
- n = 8 per group
- Xolatryp 1.25 mg/kg/h IV infusion
- Infusion commenced 5 min before reperfusion and continued for 24 h

Treatment Groups

Preservation of Myocardial Structure by Xolatryp

Preservation of Cardiac Function by Xolatryp (Echocardiography)

Plasma Biomarkers of Cardiac and Liver Injury

Xolatryp-Induced Reduction vs I/R Vehicle (%)

Key Finding

Continuous IV administration of Xolatryp immediately before reperfusion produced profound cardioprotection, reducing myocardial infarct size by **86%**, preserving left systolic function and attenuated biochemical markers of injury

Abbreviations: LAD, left anterior descending coronary artery; TTC, 2,3,5-triphenyltetrazolium chloride; AST, aspartate aminotransferase; I/R, ischemia/reperfusion; IV, intravenous; cTnI, cardiac troponin I.

Study B - Proof of Translation

Short Duration IV Infusion of Xolatryp Preserves Myocardium and Cardiac Electrical Stability Following Acute Myocardial Ischaemia in Rats

Study Overview

Preservation of Myocardial Tissue (TTC Staining)

42% reduction in infarct size at 9 mg/kg Xolatryp versus I/R vehicle

Reduced Plasma Biomarkers

Cardiac Troponin I ↓ **32%** (p = 0.014)
Alanine Transferase ↓ **21%** (p = 0.0002)

Reduced Ventricular Premature Beats (VPBs)

90% reduction in VPBs by 9 mg/kg Xolatryp versus I/R vehicle at 3 h reperfusion

Decreased Ventricular Tachycardia and Fibrillation (VT/VF)

Xolatryp completely suppressed VFs and markedly reduced VTs throughout 3 h of reperfusion

Abbreviations: LAD, left anterior descending coronary artery; TTC, 2,3,5-triphenyltetrazolium chloride; AST, aspartate aminotransferase; I/R, ischemia/reperfusion; IV, intravenous; cTnI, cardiac troponin I.

Key Finding

A short IV administration of Xolatryp dose-dependently produced cardioprotection, reduced cardiomyocyte injury, suppressed ventricular ectopy and curtailed malignant ventricular arrhythmias after myocardial ischaemia-reperfusion injury

Clinical Translation

- The safety and tolerability of Xolatryp was evaluated in a Phase I First-in-Human (FIH) study (NYR-BI03-01) as an IV infusion for up to 6 h. Xolatryp demonstrating a favourable safety profile
- The compelling cardioprotective and anti-arrhythmic efficacy observed in complementary rat myocardial ischaemia-reperfusion models directly informed the design of the ongoing PROTECT-MI Phase IIa clinical trial (<https://clinicaltrials.gov/study/NCT07362446?term=PROTECT-MI&viewType=Card&rank=4>).
- PROTECT-MI is a first-in-patient, randomised, double-blind, placebo-controlled, multicentre study evaluating whether a single 6-hour intravenous infusion of Xolatryp, administered as an adjunct standard of care in STEMI patient undergoing primary PCI is safe and well tolerated. Efficacy is explored as secondary and exploratory end points.
- Clinical outcomes will measure the incidence of AEs and SAEs with efficacy redouts including infarct size, ejection fraction, fractional shortening, serial blood cardiac biomarkers, arrhythmia monitoring and safety assessments to determine whether the cardioprotective effects observed preclinically translate to patients undergoing reperfusion therapy.

PROTECTMI

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• The investigators, research staff and patients participating in the ongoing PROTECT-MI Phase IIa clinical trial.

Disclosures

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Presenter:
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