



29th September 2022

Sydney, Australia

Presentation to ShareCafe Hidden Gems Webinar

Nyrada Inc (ASX: NYR) is pleased to provide investors with the attached presentation, which will be given by Nyrada CEO, James Bonnar at the ShareCafe Hidden Gems Webinar, from 12.30pm AEST on 30th September 2022.

The presentation will outline the Company's two lead drug development programs, with a special focus on the Cholesterol-Lowering Program. A short interactive Q&A session will follow the presentation.

To join the webinar, please register ahead of the event using the link below:

https://us02web.zoom.us/webinar/register/2116631358865/WN_G5raDBn1S6OCLPr36eBiwA

A recorded copy of the webinar will be made available on the Company's website following the event.

-ENDS-

About Nyrada Inc

Nyrada is a preclinical stage, drug discovery and development company, specialising in novel small molecule drugs to treat cardiovascular and neurological diseases. The Company has two main programs, each targeting market sectors of significant size and considerable unmet clinical need. These are a cholesterol-lowering drug and a drug to treat brain injury, specifically traumatic brain injury and stroke. Nyrada Inc. ARBN 625 401 818 is a company incorporated in the state of Delaware, US, and the liability of its stockholders is limited.

www.nyrada.com

Authorised by Mr. John Moore, Non-Executive Chairman, on behalf of the Board.

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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.



Improving Lives Through Innovation

Corporate Presentation

James Bonnar - CEO
September 2022

ASX: NYR

Authorised by Mr. John Moore, Non-Executive Chairman, on behalf of the Board.

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Portfolio of Novel High Value Small Molecule Drugs

	Indication	Aim	Target Market (US)	Status
Cardiovascular NYX-PCSK9i Oral PCSK9 inhibitor	Cholesterol Lowering	Best-in-class small molecule drug to disrupt and broaden the class in CV management	>18m Patients ¹	Phase I Study: H1 CY2023
Neurology NYR-BI02 TRPC 3/6/7 blocker	Brain Injury	First-in-class treatment to prevent secondary brain injury following moderate-severe TBI, concussion, or stroke	>3m Patients / year ²	Phase I Study: H1 CY2023

Commercially Focused Business Model

Focus Area

- **Novel small molecule treatments** for **serious and life-threatening diseases** where there is **unmet clinical need** and **large market share potential**

Development Objective

- Advance optimised drug candidates towards a **key value inflection point** of **confirming clinical safety and efficacy**

Growth Strategy

- **Build value** in lead drug assets by generating **clinical data** that **differentiates Nyrada's molecules as best-in-class**



Nyrada
inc

Cholesterol-Lowering Drug Program

Novel small molecule PCSK9 Inhibitor



Cholesterol-Lowering Market

Population, Problem, Opportunity



62.6 million

Americans have high cholesterol¹

56 million

between ages 40 and 75
treatment eligible

27.4 million

taking a statin¹

18.4 million

Unable to achieve
LDL-C target despite taking a statin¹

1 in 5 patients
statin intolerant³

Global Cholesterol Drugs Market

- USD 18.8 billion in 2021 (USD 14.7 billion statin drugs)⁴
- Est. sales revenue USD 30 billion by 2027 (**CAGR 8%**)⁵

Drivers of Market Growth

- Increasing rate of high cholesterol in patients
- Awareness of the benefits of cholesterol-lowering drugs
- New treatment options entering the market

Current PCSK9 Injectable Drugs

Expensive and Inconvenient



Competitive advantages
of a small molecule PCSK9 inhibitor



- **Patient convenience:** once per day oral treatment
- **Lower manufacturing cost**
- Dose form **can be combined with a statin** (single pill)



Effective when combined with statin treatment



Expensive US\$5,800 to US\$6,500 per year



Inconvenient for patient / poor compliance



Expensive to manufacture



Insurer / patient co-pay reluctance (US)

Benchmarking Efficacy

NYX-PCSK9i +/- Lipitor® in Transgenic Mouse Hyperlipidemia Model



Study Objective:

Determine if additive reduction in total cholesterol can be achieved with combination statin therapy

- APOE*3Leiden.CETP mouse hyperlipidemia model
- Mouse treated for 35 days (50 mg/kg BID NYX-PCSK9i)



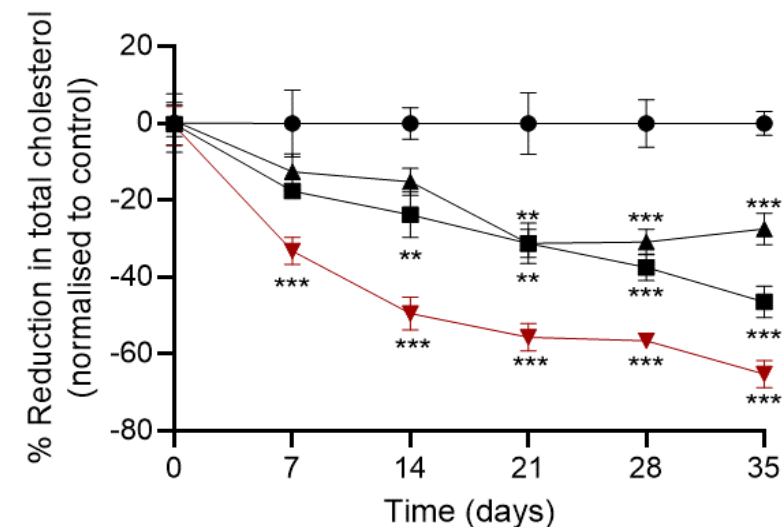
Results:

- NYX-PCSK9i + Lipitor® achieves 65% total cholesterol reduction
- No effect on body weight, food intake, liver enzymes

% Difference in plasma cholesterol versus vehicle control (p-value)

Time (days)	7	14	35
NYX-PCSK9i	-18% (0.066)	-24% (0.002)	-46% (<0.001)
Lipitor®	-13% (0.275)	-15% (0.077)	-27% (<0.001)
NYX-PCSK9i + Lipitor®	-33% (<0.001)	-49% (<0.001)	-65% (<0.001)

bold = statistically significant



- Vehicle control
- ▲ Lipitor
- 50 mg/kg NYX-PCSK9i
- ▼ 50 mg/kg NYX-PCSK9i and Lipitor

Efficacy in Model of Atherosclerosis

NYX-PCSK9i in Human Tissue-Engineered Blood Vessel Model⁶



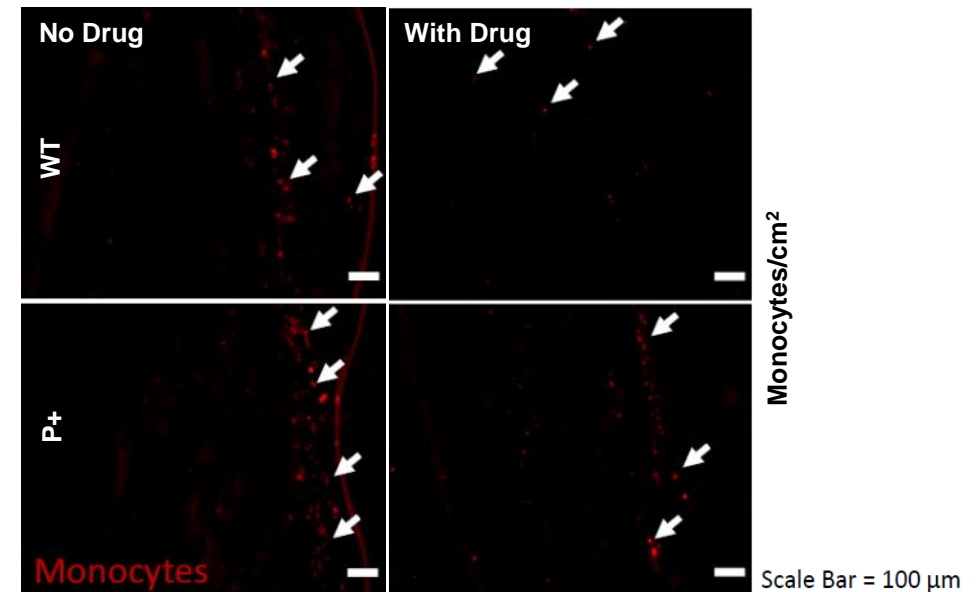
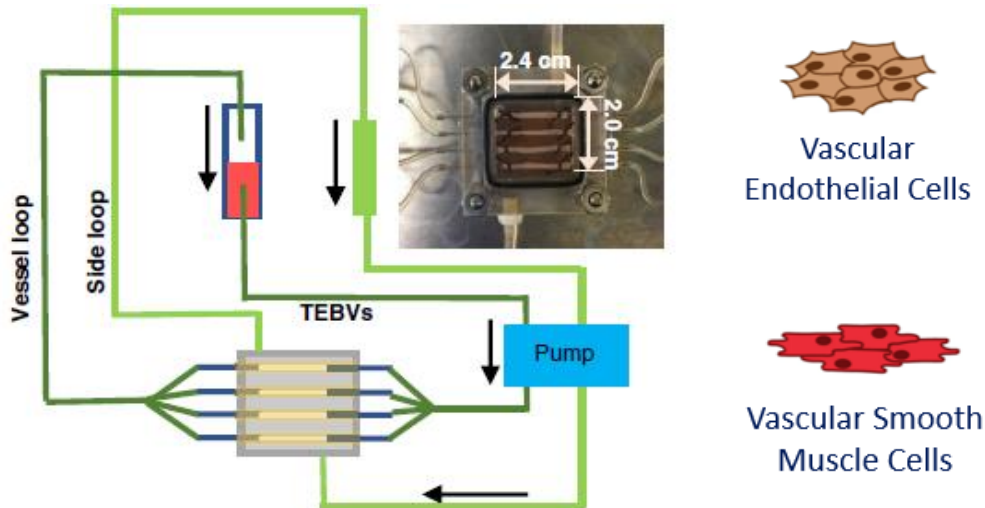
Study Design

- Researchers at Duke University (US) used human stem cells to create tissue-engineered blood vessels (TEBVs), replicating early features of atherosclerosis
- Evaluated the effect of PCSK9 inhibitor drug on inflammation and atherosclerotic plaque formation, a major cause of cardiovascular disease

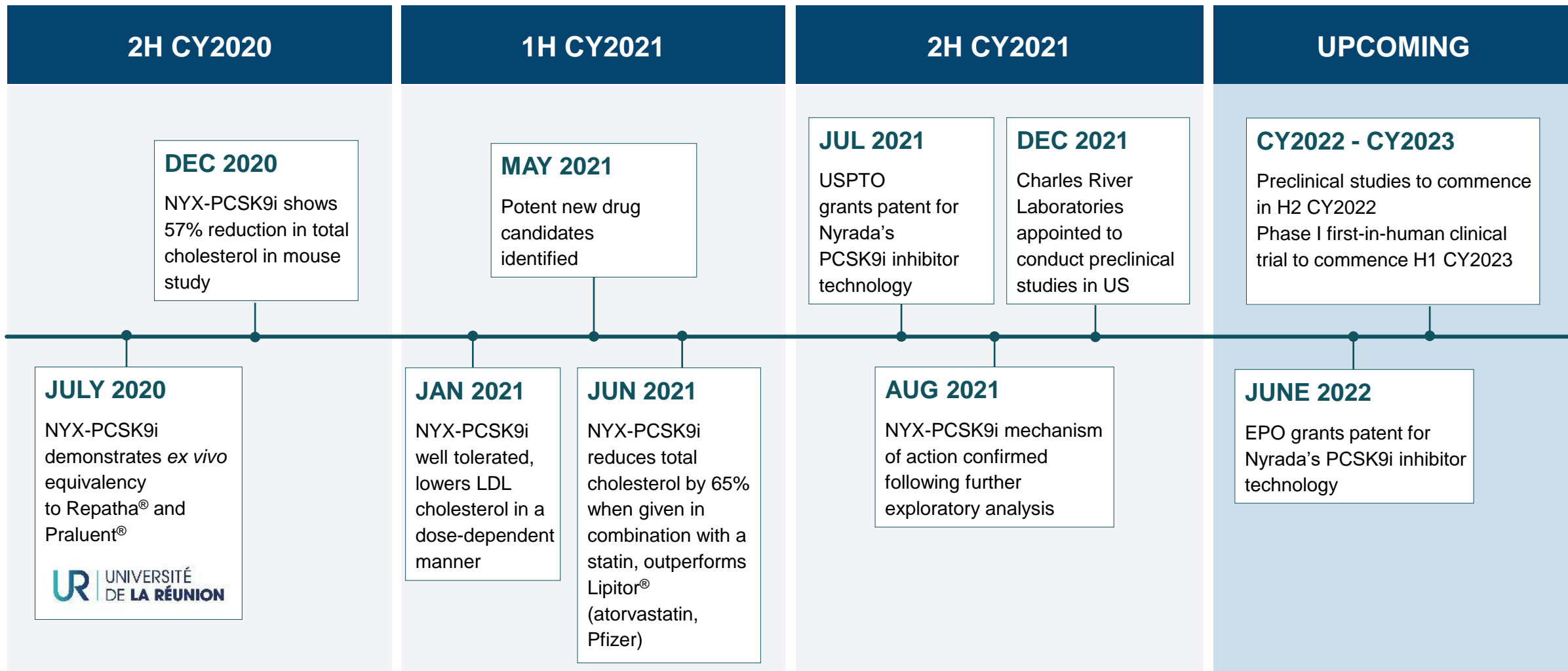


Results:

- Optimised analog of NYX-PCSK9i reduced cell adhesion (blocking atherosclerotic plaque formation)
- Nyrada's drug candidate reduced inflammatory response (cytokine levels) – a key driver of atherosclerosis
- Optimised analog of NYX-PCSK9i selected for Phase I



Program Milestones and Path to the Clinic



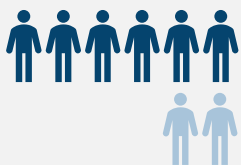
Phase I Study Design

OBJECTIVES

- Evaluate safety, tolerability, and pharmacokinetics of optimised analog of NYX-PCSK9i
- Measure changes in LDL-cholesterol in healthy volunteers and exploratory patient population cohorts

PARTICIPANTS

- 10 cohorts (6 active: 2 placebo per cohort)
- **Cohorts 1-8:** 64 healthy volunteers
- **Cohorts 9-10:** 16 hypercholesterolemic patients, 8 taking statins



Active arm

Placebo

DESIGN

- Double-blind, randomised, placebo-controlled, dose escalation study
- Healthy volunteers: Single ascending oral dose (Cohorts 1-5)
- Healthy volunteers: Once daily oral dose over 14-day treatment period (Cohorts 6, 7, 8)
- Patient population: Once daily oral dose over 14-day treatment period (Cohort 9 no statins, Cohort 10 statin co-treatment)
- Pharmacokinetic and pathology samples will be collected at selected time points over the trial period for all subjects.

LOCATION & DURATION

- Study will be conducted at a clinical trial center in Australia
- The dosing period will vary between 1 – 14 days in both healthy volunteers and exploratory patient population cohorts



*trial design subject to ethics approval



Corporate Snapshot

ASX:NYR

Key Metrics

Market capitalisation
(as at 28 September 2022) **A\$20.3M**

Share price
(as at 28 September 2022) **A\$0.13**

CDIs free float **156,008,700**

Cash at bank 30 June 2022:
• Adequate funding for Phase I studies **A\$10.8M**

ASX listing **January 16, 2020**

Management Team with Proven Industry Experience



James Bonnar - CEO

- Business executive with 25 years experience in healthcare companies in the UK, China, New Zealand, and Australia
- Experience in drug manufacture, preclinical development, clinical operations, regulatory affairs, and quality assurance
- Biotech experience spanning various therapeutic areas including cardiometabolic disease, neurodevelopment disorders, and brain injury



Cameron Jones - CFO

- Finance executive with experience as CFO and Company Secretary of ASX Listed and VC investee healthcare companies
- Supported several healthcare companies through IPOs, capital raisings and M&A transactions
- Managing Director of Bio101, financial services firm
- Chartered Accountant, Member of the Governance Institute of Australia and Registered Tax Agent



Dr Benny Evison - CSO

- More than 20 years experience in the discovery and development of small molecule inhibitors as therapies for various cancers, cardiovascular diseases and neurodegenerative diseases
- Obtained a PhD at La Trobe University (Melbourne, Australia) in biochemistry and molecular biology, and a postdoctoral fellowship in chemical biology at St Jude Children's Research Hospital, (Memphis TN)

High calibre Board with proven track record in realising the value of biotech companies:

- **John Moore**
Chairman
- **Christopher Cox**
Non-Executive Director
- **Marcus Frampton**
Non-Executive Director
- **Dr Rüdiger Weseloh**
Non-Executive Director
- **Dr Ian Dixon**
Non-Executive Director
- **Dr Gisela Mautner**
Non-Executive Director

References

- 1 Wong ND et al. Prevalence of the American College of Cardiology/American Heart Association statin eligibility groups, statin use, and low-density lipoprotein cholesterol control in US. J Clin Lipidology. 2016
- 2 Brain Injury Alliance (Connecticut): <http://www.biact.org/understanding-brain-injury/brain-injury-facts-statistics> and US Centers for Disease Control and Prevention: <https://www.cdc.gov/stroke/facts.htm>
- 3 Management of Statin Intolerance in 2018: Still More Questions Than Answers, Toth PP, Patti AM, Giglio RV, Nikolic D, Castellino G, Rizzo M, Banach M. Am J Cardiovasc Drugs. 2018 Jun;18(3):157-173
- 4 Cholesterol Lowering Drug Market Research Report by Disease Type, Class of Drug, Distribution Channels, Region - Global Forecast to 2027 - Cumulative Impact of COVID-19, July 2022 and Global Statin Market – Industry Trends and Forecast to 2029, Data Bridge Market Research
- 5 Cholesterol Lowering Drug Market Research Report by Disease Type, Class of Drug, Distribution Channels, Region - Global Forecast to 2027 - Cumulative Impact of COVID-19, July 2022
- 6 Adapted from Zhang et al. Nat Commun. 2020. 11(1): 5426 and modified from Nature cell biology, 17(8), 994-1003



Brain Injury Solution
Animation



Cholesterol-Lowering
Animation



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