



Nyrada Inc.

Investor Presentation
April 2024

Improving Lives, Offering Hope

ASX:NYR

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About Nyrada

- › Nyrada is a US incorporated, Australia based drug discovery and development company specialising in novel small molecule therapeutics.
- › Commercially focused business model and expert team.
- › Experienced Board of Directors and Scientific Advisory Board with impressive track record in biotech.
- › Nyrada's lead Brain Injury Program drug candidate NYR-BI03 demonstrated strong efficacy protecting the brain from secondary injury in recently announced preclinical study. Program.
- › Low-cost exploratory works ongoing in Cholesterol Lowering Program.



Management Team with Proven Industry Experience



James Bonnar - CEO

- › Business executive with 25 years of 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 of 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)

Supported by specialist advisers:

- **Prof Gary Housley**
Brain injury program
- **Prof Junichi Nabekura**
Brain injury program
- **Dr Jim Palmer**
Medicinal Chemist
- **Dr Mike Bickerdike**
Toxicologist

High Calibre and Internationally Experienced Governing Board

- › Nyrada operates under the direction of a governing board of international calibre
- › Strong track record in finding and realising the value of biotech companies
- › Experience in dealmaking, US/EU/AU capital markets, and relevant therapeutic area experience



John Moore
Non-Executive Chair



Dr Ian Dixon
Non-Executive Director



Dr Gisela Mautner
Non-Executive Director



Marcus Frampton
Non-Executive Director



Dr Rüdiger Weseloh
Non-Executive Director



Christopher Cox
Non-Executive Director

Nyrada Investment Proposition

- › Globally experienced and proven team.
- › First-in-class therapy with novel mode of action.
- › Significant target market and unmet clinical demand.
- › Collaborations with world leading institutions, Walter Reed Army Institute of Research (WRAIR) and UNSW Sydney.
- › Cash position at 31 March 2024 was A\$5.60M.



March 2024 Capital Raise

Nyrada has concluded a placement for A\$1,755,000 before costs

New Capital

- A placement of approximately A\$1.755M of new equity capital, comprising 23,400,000 Chess Depository Interests (CDIs), to professional and sophisticated investors.
- The Placement issue price is A\$0.075 per CDI, representing a 16.7% discount to the last traded price and 26.1% discount to the 15-day VWAP.

Director Participation

- Nyrada Directors will subscribe for an additional \$0.210M of CDIs on the same terms as the placement CDIs.
- This allocation to Directors is subject to shareholder approval with an Extraordinary General Meeting (EGM) provisionally scheduled for 16 May 2024.

Use of Funds

- Remaining preclinical work and a Phase I in-human clinical trial of NYR-BI03
- Prepare and submit Investigational New Drug (IND) applications with the US FDA for NYR-BI03's use in both traumatic brain injury (TBI) and stroke
- Planning and preparation for a Phase II in-human trial of NYR-BI03's effectiveness in TBI and stroke.

Key 3QFY2024 Financials

- A\$5.60 million cash at 31 March 2024
- A\$4.65 million cash at 31 December 2023

- 3QFY2024 cash operating outflows – A\$0.73 million
- 2QFY2024 cash operating outflows – A\$1.21 million

- Fully subscribed placement raised A\$1.76 million (before costs)
- Additional A\$0.21 million (before costs) expected following 16 May 2024 EGM



Nyrada's Lead Brain Injury Candidate – NYR-BI03

First-in-Class with Novel Mechanism of Action

- › NYR-BI03 is a first-in-class therapy.
- › Novel mechanism of action.
- › Australian developed innovation.

Significant Unmet Clinical Need and Market Opportunity

- › Targeting multiple indications.
- › Stroke and TBI are leading causes of death and disability.
- › No current FDA approved drugs to treat secondary brain injury.

Statistically Significant Neuroprotection Achieved

Recent preclinical study demonstrated strong efficacy and good tolerability

42%

of brain injury in penumbra region rescued on average

MRI brain imaging showed a statistically significant neuroprotection achieved when animals received treatment (p value 0.021)¹

41%

mean level of biomarkers for NYR-BI03 animals compared to control vehicle

NfL biomarker levels likely reflect neuroprotection. The mean level for the NYR-BI03 animals was 41% lower than the control vehicle (p value 0.068)²

Supporting NYR-BI03's favourable safety profile, the current study had no drug-related adverse effects.

Preclinical Study Design

- The study involved inducing a focal ischemic stroke using a photothrombotic model.
- 16 test animals were treated with either NYR-BI03 or vehicle 30 mins following the induced brain injury. Treatment was conducted for 72 hours via continuous intravenous infusion.

1. p value 0.021, Mann-Whitney Rank Sum Test.

2. p value 0.068, t-test.

Large Market Opportunity – Stroke

Globally:

~15 million
people suffer
strokes annually¹

~5 million
left permanently
disabled¹

One approved drug class for stroke suitable for <15% of patients (tPA - tissue plasminogen activator).

Effective treatment will improve patient outcomes and reduce high costs associated with long-term care.

Large and growing treatment market:

Currently
~US\$30.3 billion²

Growing
~7.5% CAGR²

Forecast
**~US\$52.2 billion
by 2030²**



Large Market Opportunity – Traumatic Brain Injury (TBI)

Globally:

~5.5 million
people suffer severe
TBA annually³

~55 million
living with effects of
medically treated TBI³

No current FDA approved treatments

Effective treatment will improve patient outcomes and reduce high costs associated with long-term care of brain injury survivors.

Large and growing treatment market:

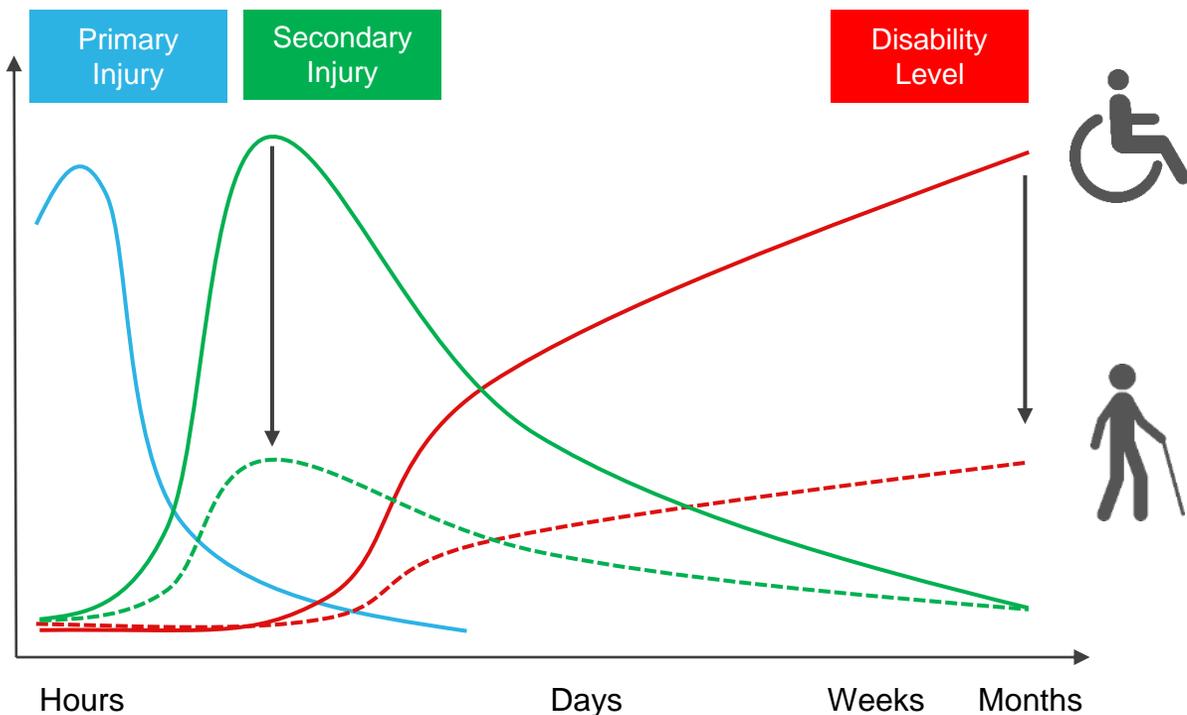
Currently
~US\$3.5 billion⁴

Growing
~6.2% CAGR⁴

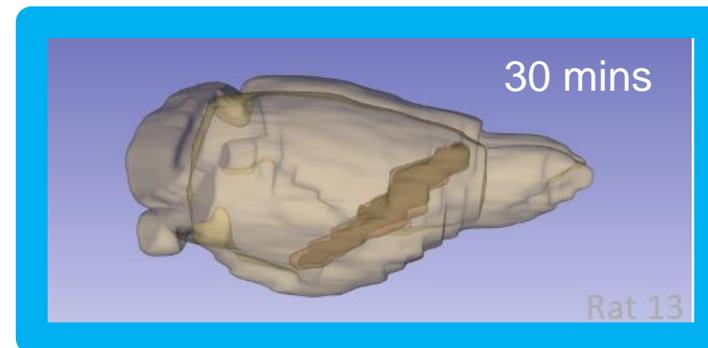
Forecast
**~US\$5.5 billion
by 2030⁴**



Brain Injury Trajectory, Patient Outcomes, Treatment Aims



Serial reconstruction from MRI



Nyrada drug NYR-BI03
An acute 3-day intravenous treatment



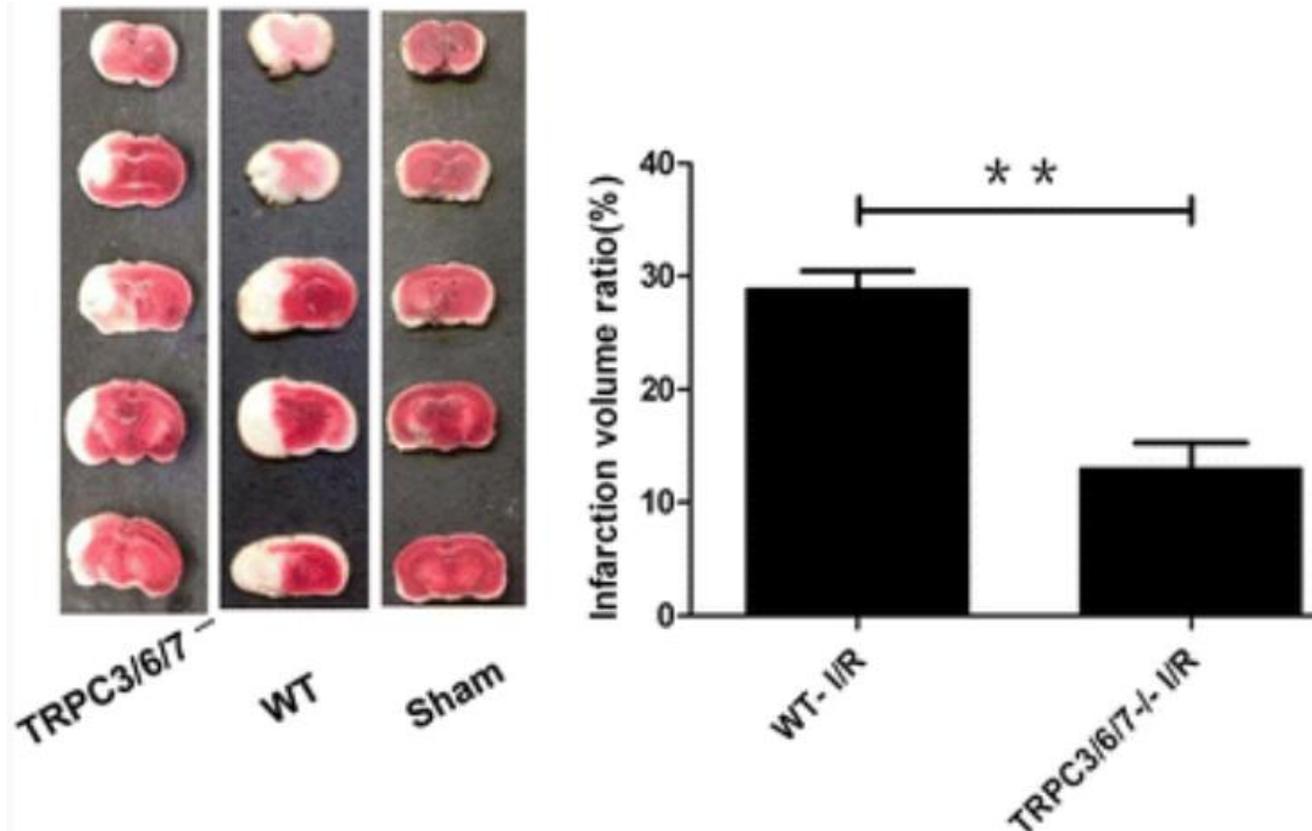
Reduce secondary injury resulting from stroke or TBI

- Improve survivability, limit disability
- Improve quality of life

Proof-of-Concept:

TRPC 3/6/7 Knockout Mouse Model

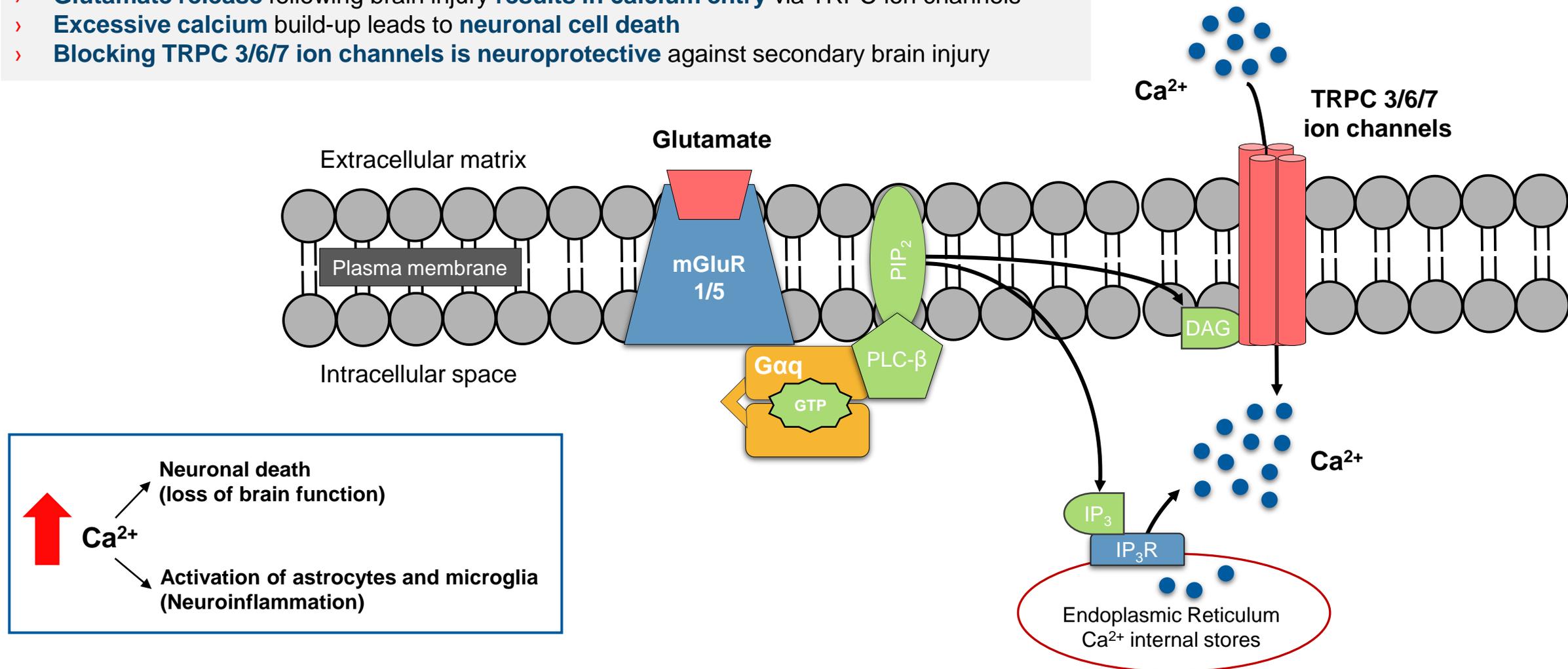
Middle cerebral artery occlusion (MCAO) stroke model shows neuroprotection in TRPC3,6,7 triple knockout mouse



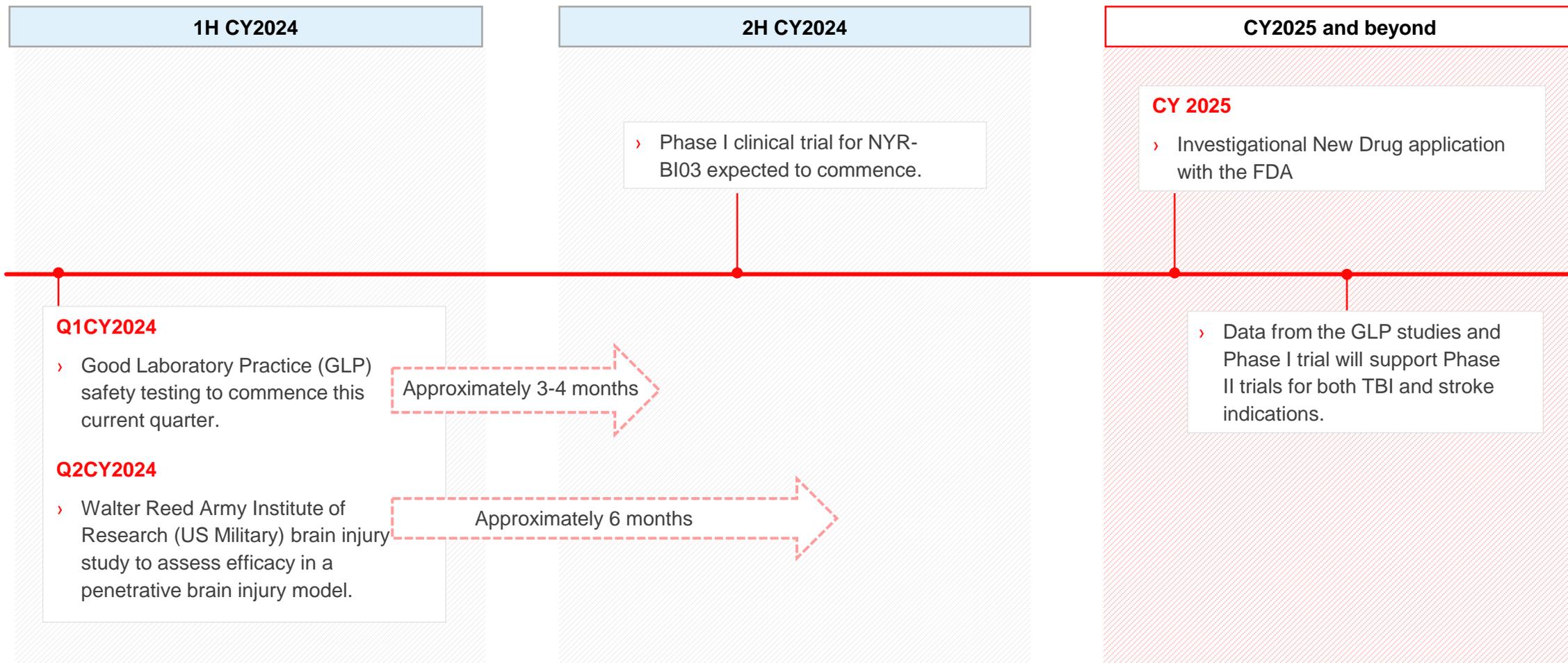
- › TRPC 3/6/7 KO mice have significantly smaller lesion size compared to WT in a mouse middle cerebral artery occlusion model (Chen et al. Mol. Neurobiol. 2017)
- › NYR-BI03 blocks TRPC3/6/7 channels

TRPC 3/6/7 Ion Channels as a Therapeutic Target

- > **Glutamate release** following brain injury **results in calcium entry** via TRPC ion channels
- > **Excessive calcium** build-up leads to **neuronal cell death**
- > **Blocking TRPC 3/6/7 ion channels** is **neuroprotective** against secondary brain injury



Brain Injury Program Milestones Ahead



Brain Injury Program - Indicative Phase I Study Design

Commencing in 2HCY2024

OBJECTIVES To assess the safety, tolerability, and pharmacokinetics of NYR-BI03

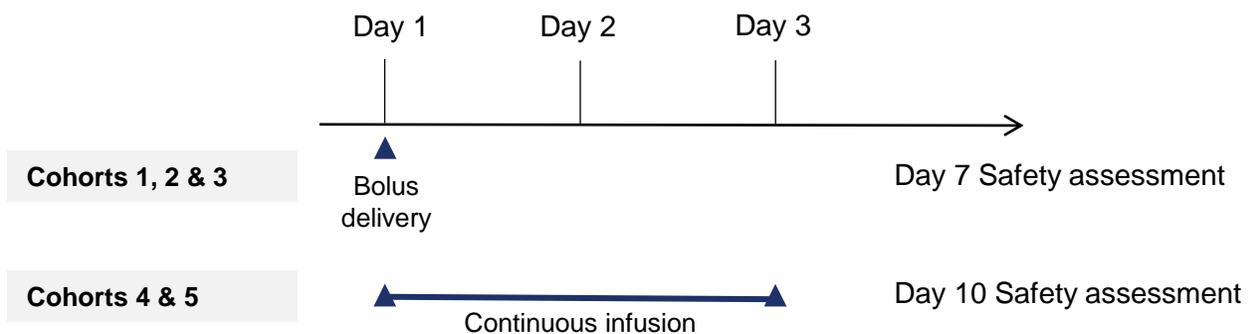
- DESIGN**
- Randomised, double-blind placebo – controlled, dose escalation design
 - 5 cohorts; 8 participants each cohort; 6:2 active and placebo treatments
 - 3 cohorts will be single ascending doses
 - 2 cohorts will be given continuous infusion doses

- PARTICIPANTS**
- Male and female healthy volunteers
 - 18 – 50 years age



Cohort number	Dose administered
1	Low dose single bolus
2	Medium dose single bolus
3	High dose
4	Low dose continuous infusion (72 hrs)
5	High dose continuous infusion (72 hrs)

- LOCATION & DURATION**
- Study will be conducted at a clinical trial centre in Australia 2H CY2024
 - The study duration will vary between 1 – 4 days



*trial design subject to ethics approval

Summary

Nyrada is advancing a novel drug candidate to reduce the secondary brain injury caused by stroke or traumatic brain injury.

Strong efficacy



NYR-BI03 protects the brain from secondary injury in newly announced preclinical study

First-in-class therapy



With a novel mechanism of action

Large patient markets



Significant market opportunity in stroke and traumatic brain injury markets

Near term milestones



Final safety tests commencing in coming weeks and first-in-human trials in 2HCY2024

Nyrada's Vision and Strategy



Our vision

To become a high growth pharmaceutical discovery and development company specialising in early-stage drug development of novel treatments.



Our strategy

To develop treatments for diseases where there is an unmet clinical need, or where current treatments are suboptimal, and to monetise the value of these treatments through advancing highly optimised drug candidates towards out-licensing.

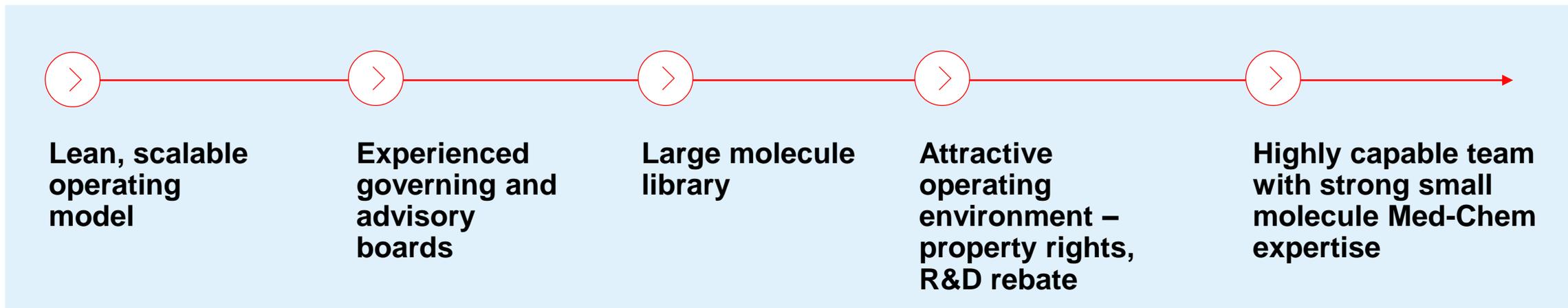


Advancing our strategy

Delivering upon our vision and strategy through our brain injury program via a TRPC ion channel blocker.

Commercially Focused Business Model

We aim to create value for patients and shareholders by advancing highly optimised drug candidates towards out-licensing.



References

- 1 – World Health Organization - <https://www.emro.who.int/health-topics/stroke-cerebrovascular-accident/index.html#:~:text=Annually%2C%2015%20million%20people%20worldwide,cause%20is%20high%20blood%20pressure>
- 2 – Databridge Market Research - <https://www.databridgemarketresearch.com/reports/global-stroke-market> .
- 3 – National Academy of Sciences - <https://nap.nationalacademies.org/catalog/25394/traumatic-brain-injury-a-roadmap-for-accelerating-progress>
- 4 – Databridge Market Research - <https://www.databridgemarketresearch.com/reports/global-traumatic-brain-injuries-treatment-market>



Brain Injury Solution
Animation



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



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