



Life-changing
science

Corporate Presentation

May 2022

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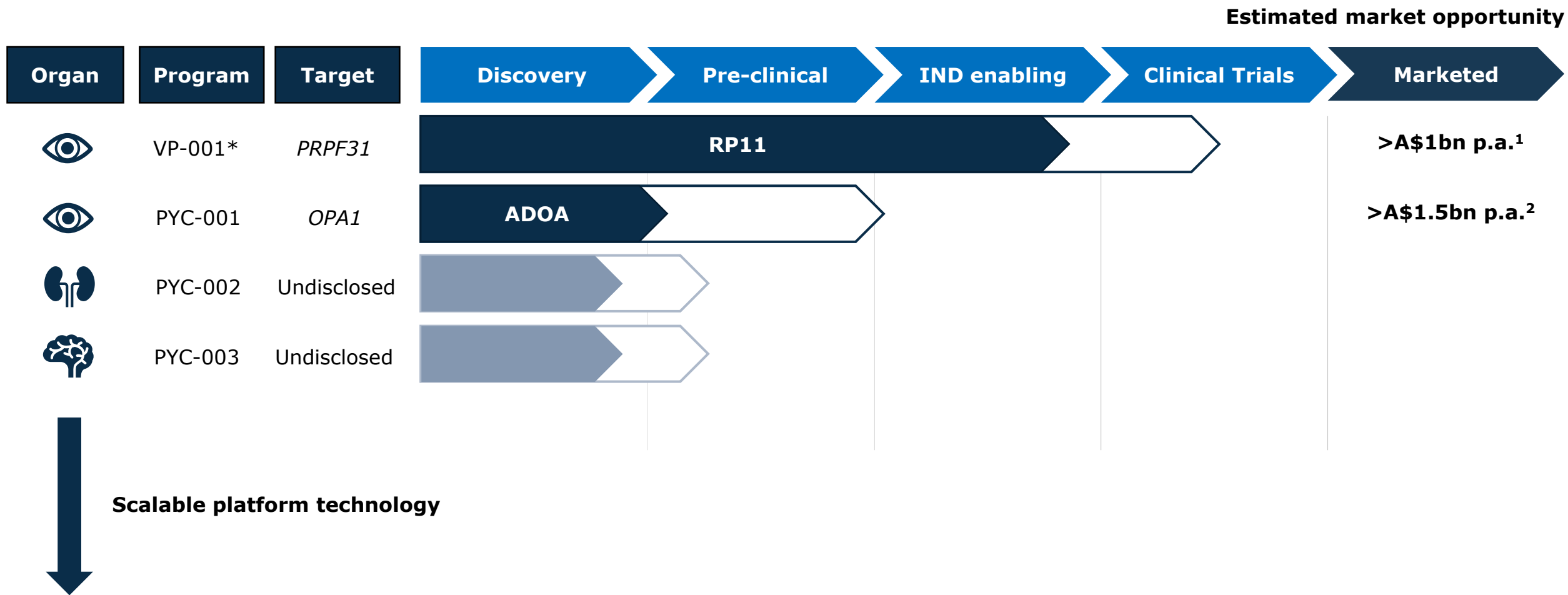
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PYC Therapeutics:

- Designs and develops **precision RNA therapies** for patients with genetic diseases who currently have no treatment options available
- Overcomes the major challenge in the precision medicine field (getting enough drug to the target) through its proprietary **drug delivery platform**
- Is progressing **multiple programs** built on this platform technology into clinical development in the area with the **highest prospect of success** in the industry (monogenic diseases)¹

¹ Refer addendum

PYC strives to change patient lives in markets estimated to be worth > A\$1 billion p.a. each



PYC 93.5% ownership of VP-001 (6.5% ownership by Lions Eye Institute, Australia) and 100% ownership of all other pipeline programs

- 1. refer footnote slide 8
- 2. refer footnote slide 14

PYC operates within a specific domain and with a clear competitive advantage



PYC's probability of successful market entry is higher than the industry average and the Company benefits from the potential of a rapid path to market in the unmet needs it is addressing



Orphan Drug

Estimated >\$1bn p.a. market for each of the Company's programs - Target orphan (rare) diseases (patient populations < 200,000 in US)



Monogenic diseases

5x greater success rate in clinical trials compared to polygenic diseases¹ - PYC focuses on monogenic diseases with high target validation



Delivery Platform

100x more drug to the target via patented delivery technology compared to current industry methods



Rapid path to market

Targeted diseases have no current treatments available – potentially reducing the time taken in the **path to market**



Focus on blindness

Initially targeting eye diseases due to the major unmet patient need and controlled delivery environment

¹ Refer addendum

PYC's RNA technology outperforms the 'industry standard' ('naked' RNA technology) by >100x in animal models



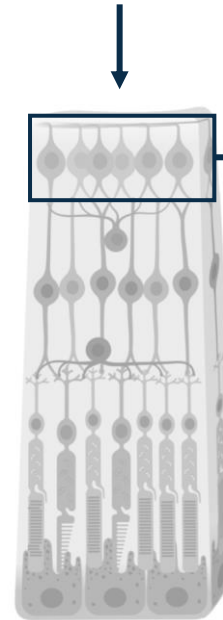
Drug administered to mouse eye

- PYC's RNA tech
- versus
- Industry standard tech



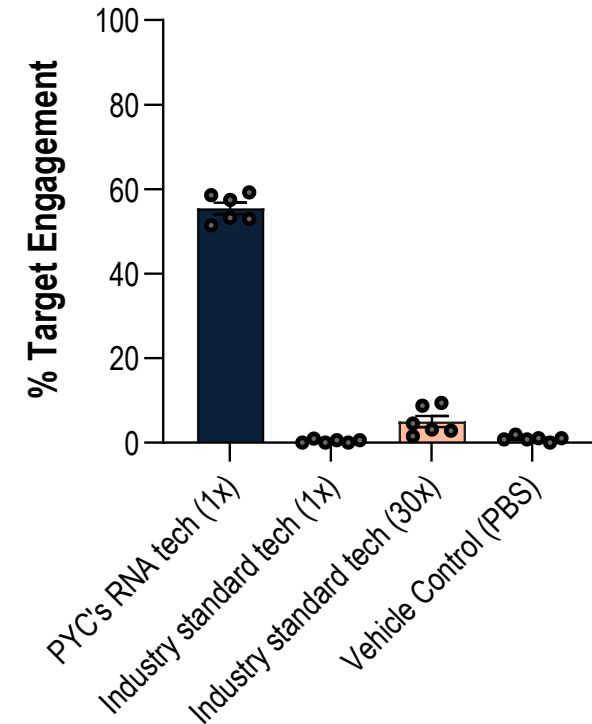
Cross section of mouse retina

Drug trafficking through retina



Target cells affected in blinding eye disease

Target engagement in target cells*

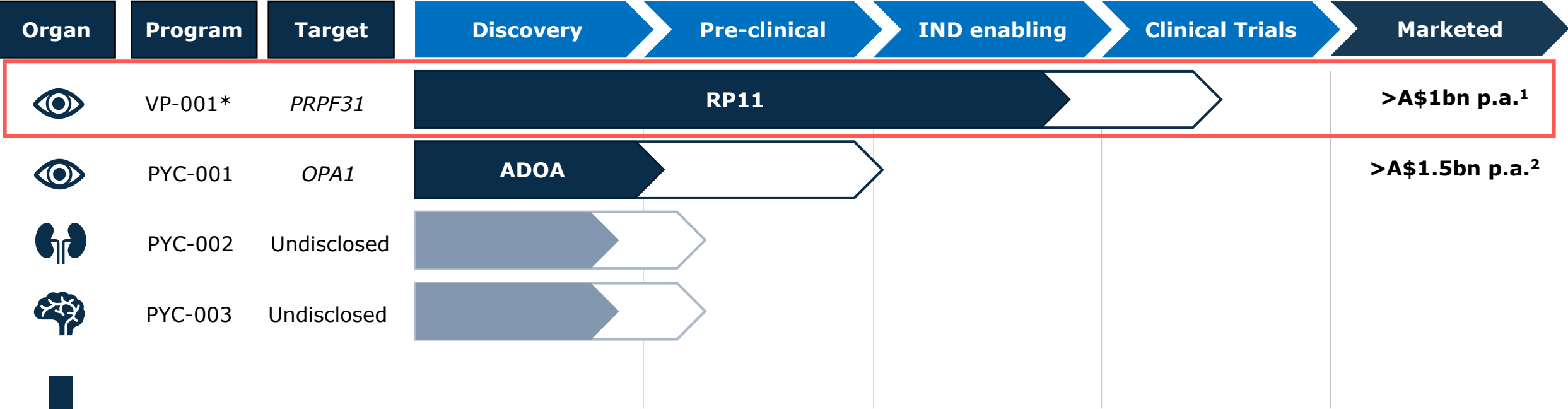


*BaseScope analysis of mouse retina harvested 7 days after administration of PYC's RNA technology PPMO (24mer PMO skips Smn m7A; 1x: 3.2ug/64uM) versus industry standard 2'MOE (24mer skips Smn m7A; 1x: 2.7ug/64uM or 30x: 82ug/1910uM). Data points represent 3 eyes (2 images/eye). Statistical significance $p < 0.0001$ for PYC's RNA tech compared to both doses of 'Industry standard tech'/2'MOE oligo on one-way ANOVA.

PYC's co-lead program for a blinding eye disease is set to enter clinical trials in 1H 2023



Estimated market opportunity

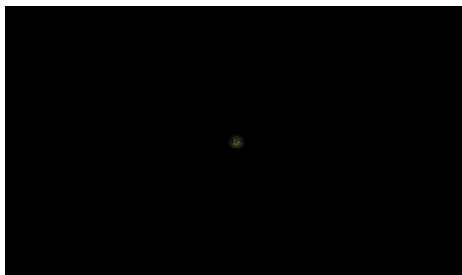
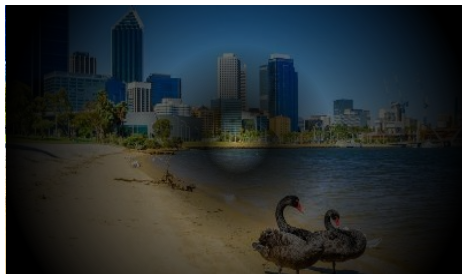


Scalable platform technology

PYC 93.5% ownership of VP-001 (6.5% ownership by Lions Eye Institute, Australia) and 100% ownership of all other pipeline programs

1. refer footnote slide 8
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Degenerative sight of RP11 patient



- Onset from early childhood with sight deteriorating through adolescence and ultimately leading to blindness
- Estimated 4k-8k addressable patients in the western world²
- **No current treatment options for patients nor any treatments in clinical development that address the underlying cause of the disease**
- PYC's RP11 program restores levels of the deficient PRPF31 protein in RP11 patients to stop the deterioration of their sight



Orphan Drug pricing applicable (~A\$200k p.a. per patient³)



Addressable market: Revenue >A\$1.0b p.a.⁴



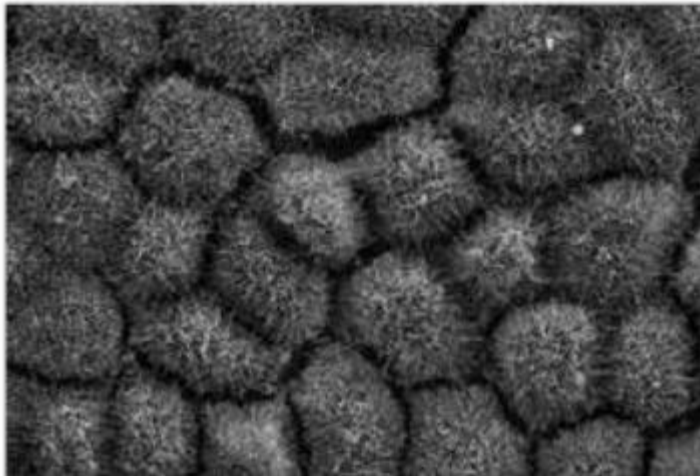
Expected to enter phase 1/2 clinical trials 1Q23

2. Refer addendum
3. Refer addendum
4. ^assumed orphan pricing (A\$200k) multiplied by addressable population midpoint (6k patients)

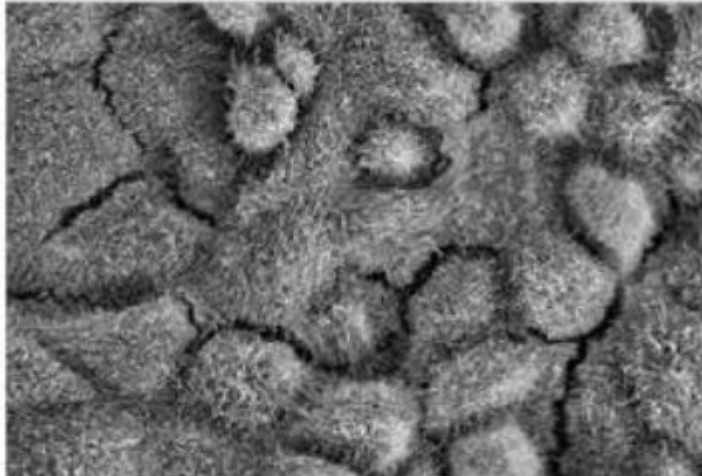
The impact of PYC's next generation RP11 therapeutic is clearly visible in patient-derived 'retina in a dish' models

Retinal pigmented epithelium (RPE) cells in a:

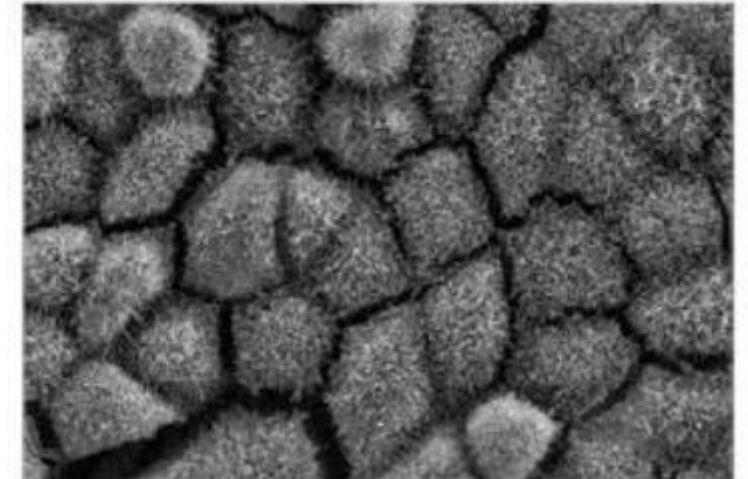
1. Healthy individual



2. Patient with RP11



**3. Patient with RP11 after
a single dose of PYC's precision therapy**



A single dose of PYC's precision therapy restores RP11 patient-derived RPE cells back towards the appearance of cells from 'healthy' (unaffected) individuals

Scanning Electron Microscopy images of three iPSC-derived retinal pigment epithelial cells harvested from a 'retina in a dish' model from a wild type control and an RP11 patient with and without treatment (single dose of 5uM RP11 program lead molecule, with image taken at 28 days post administration)

PYC's novel precision medicine modality is ideally suited to the treatment of blinding diseases of the retina

Dimension of drug profile

Effective

Safe

Durable

Specific

Route of administration
advantage

Evidence supporting

Functional improvement in patient-derived models and substantial amounts of drug present in Non-Human Primate (NHP) retinas*

The RP11 drug candidate is well tolerated at relevant doses in NHPs^

PK studies in NHPs suggest patients likely require 3-4 doses per year ensuring a long dosing interval preferred by patients

Not detectable in plasma following dosing and minimal drug distribution to the anterior segment (front) of the eye in NHPs*

Able to be dosed by intravitreal injection (simple, short out-patient procedure)

*See ASX announcement of 10 May 2022; ^See ASX announcement of 16 November 2021

PYC is set to become a clinical-stage company with the progression of the RP11 program into a combined phase 1/2 study in 1H 2023



RP11 is well progressed through non-clinical testing and is on track to enter phase 1/2 clinical trials in human patients in 1H 2023

Achievements to date



Expected major milestones in next 12 months ¹

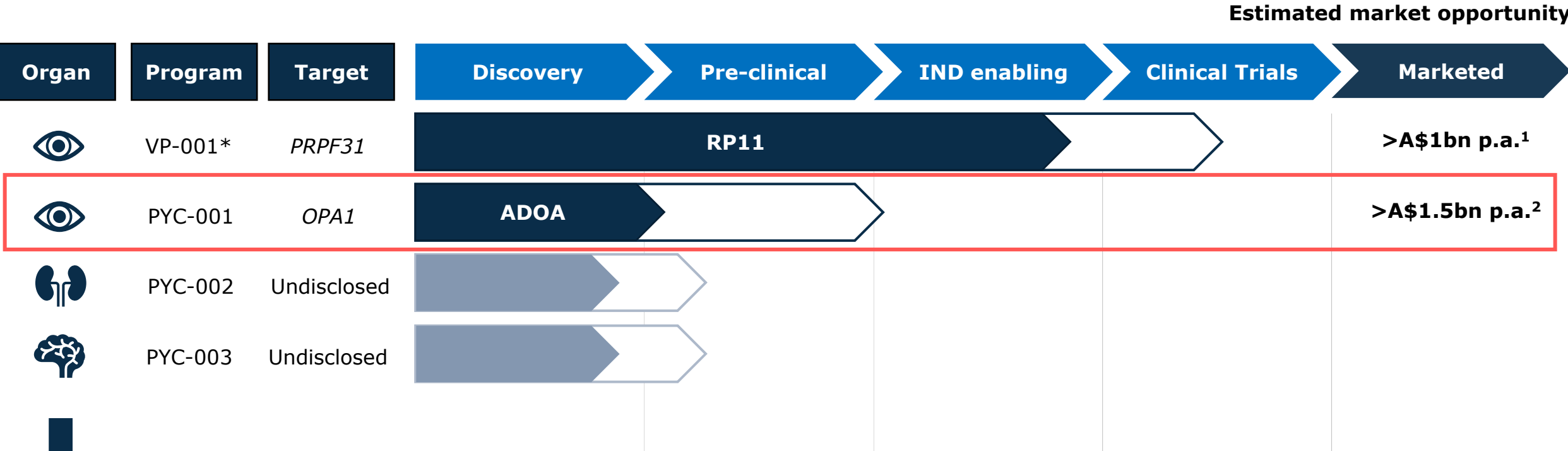


*NHP – Non-Human Primate.

[^] Single Ascending Dose study in humans

1. Management's current estimate on timing of upcoming major milestones.

PYC's precision therapy for a second blinding eye disease addresses a larger patient population than the RP11 program



Scalable platform technology

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Autosomal dominant optic atrophy (ADOA) is a genetic disease causing progressive blindness

- The majority of ADOA cases are caused by mutations in the *OPA1* gene leading to haploinsufficiency of the OPA1 protein¹
- Characteristics of *OPA1* ADOA are:
 - **Severe, progressive blinding eye disease**
 - Onset between the ages of 5 and 20
 - Primarily affects central vision
 - Leads to blindness between 40-50 years of age
- There are **no approved drugs for treatment of these patients**

PYC's OPA1 program aims to return the level of OPA1 protein in ADOA patients back to "normal" levels and stop the degeneration of patient sight.



Autosomal Dominant Optic Atrophy (ADOA Program)

1 : 30,000

Prevalence of 1 in 30,000 people in the western world^{4,5}



Estimated addressable population of 9k-16k patients



Addressable market: Revenue >A\$1.5bn p.a.*



Primarily a pediatric disease with patients usually diagnosed between the ages 4-6



Orphan Drug pricing applicable (~A\$200k p.a. per patient³)



Currently expected to enter clinical development in 2024

3. Refer addendum

4. Refer addendum

5. Refer addendum

*assumed orphan pricing (A\$200k) multiplied by estimated population low point (9k patients)

PYC's team has the knowledge and experience required to deliver



Board

Alan Tribe
Chairman



Experience commercialising Australian technology in US markets, and managing and leading growth companies across technology, resources and retail

Dr Michael Rosenblatt
Director



Senior Partner with Flagship Pioneering, previously EVP and Chief Medical Officer at Merck. Deep experience in leading numerous drug development programs, and guiding strategies at biopharma and academic institutions

Jason Haddock
Director



Over 20 years' experience in finance, operations and commercialisation of biotechnology companies including at Array BioPharma and Bristol Myers Squibb

Executive

Dr Rohan Hockings
Chief Executive Officer



Dual-trained in medicine and law with experience across both disciplines in addition to roles in strategy consulting and private equity

Prof Sue Fletcher
Chief Scientific Officer



Leading global expert and pioneer in RNA therapeutics with over 30 years experience developing RNA drugs. Co-inventor of Exondys-51, Vyondys-53, and Amondys-45 and VP-001

Dr Glenn Noronha
Chief Development Officer



Over 20 years experience leading drug development programs, including 6 ocular programs from discovery to clinical development and approval. Previous C-suite and leadership roles at Clearside, Foresight, BridgeBio, and Alcon

Andrew Taylor
Chief Financial Officer



Held senior finance positions in ASX listed organisations. Completed multiple equity raisings, debt refinances and M&A transactions.

Advisory Board

Prof Ian Constable
Scientific Ad. Board



Renowned Ophthalmologist for over 50 years. Founding Managing Director and now the Patron of the Lions Eye Institute Western Australia. Pioneered first in man gene therapy for macular degeneration

A/Prof Fred Chen
Scientific Ad. Board



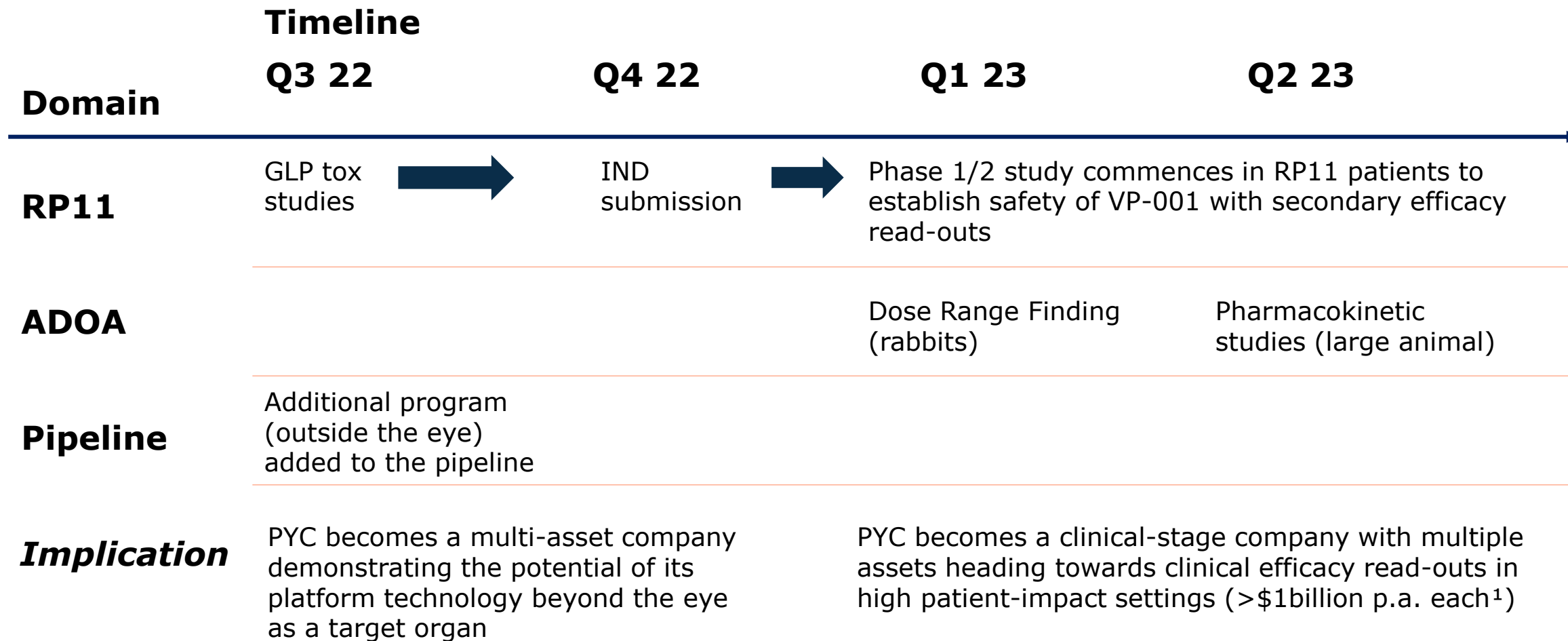
Ophthalmologist at Lions Eye Institute (LEI), Royal Perth Hospital and Perth Children's Hospital Western Australia. Performed over 800 vitrectomy surgeries. Lead Research Scientist LEI's Ocular Tissue Engineering Laboratory

Dr Mark Pennesi
Scientific Ad. Board



Professor of Ophthalmology at Oregon Health & Science School of Medicine. PI & co-PI on numerous clinical trials and investigator for Antisense Oligonucleotide therapies

The next 12 months are transformational for PYC



¹ Refer addendum

1. Advancing Human Genetics Research and Drug Discovery through Exome Sequencing of the UK Biobank. doi: <https://doi.org/10.1101/2020.11.02.20222232>
2. Sullivan LS, Bowne SJ, Seaman CR, Blanton SH, Lewis RA, Heckenlively JR, et al. Genomic rearrangements of the PRPF31 gene account for 2.5% of autosomal dominant retinitis pigmentosa. *Invest Ophthalmol Vis Sci.* 2006;47(10):4579-88.
3. Input assumptions include 2019 mean orphan drug pricing of US\$150,854 (EvaluatePharma: https://www.evaluate.com/sites/default/files/media/download-files/EvaluatePharma_Orphan_Drug_Report_2019.pdf) applying throughout the Western World and addressable patient populations exceeding 5,000 in each indication consistent with Sullivan et al. for Retinitis Pigmentosa type 11 (Sullivan LS, Bowne SJ, Seaman CR, Blanton SH, Lewis RA, Heckenlively JR, et al. Genomic rearrangements of the PRPF31 gene account for 2.5% of autosomal dominant retinitis pigmentosa. *Invest Ophthalmol Vis Sci.* 2006;47(10):4579-88) and Yu-Wai-Man et al. for Autosomal Dominant Optic Atrophy (P. Yu-Wai-Man, P. G. Griffiths, A. Burke, P. W. Sellar, M. P. Clarke, L. Gnanaraj, et al. *Ophthalmology.* 2010;117(8):1538-46 doi: 10.1016/j.ophtha.2009.12.038)
4. P. Yu-Wai-Man, P. G. Griffiths, A. Burke, P. W. Sellar, M. P. Clarke, L. Gnanaraj, et al. *Ophthalmology.* 2010;117(8):1538-46 doi: 10.1016/j.ophtha.2009.12.038
5. Amati-Bonneau, P. et al. OPA1-associated disorders: phenotypes and pathophysiology. *The international journal of biochemistry & cell biology,* 2009;41(10), 1855–1865. doi: 10.1016/j.biocel.2009.04.012



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Thank you