

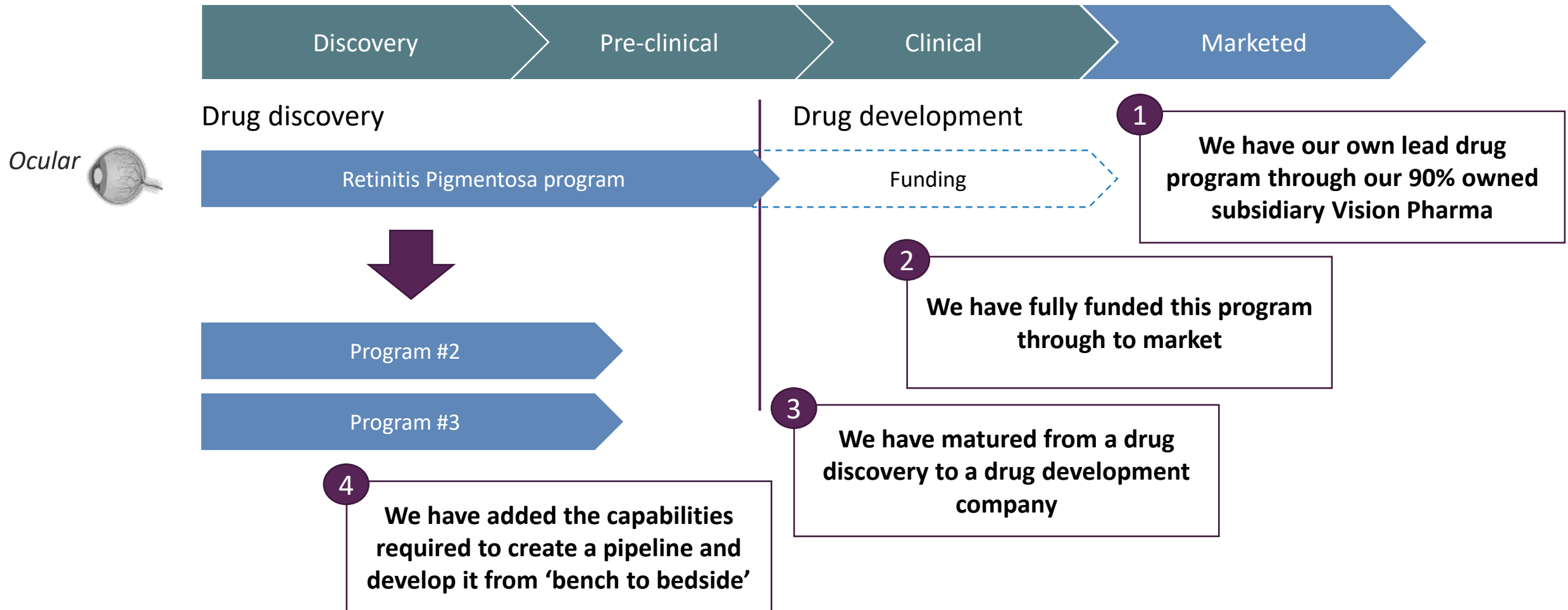


PYC Annual General Meeting
November 2019

PYC is a drug development company with a lead program that can reverse a form of childhood blindness



PYC has delivered 4 major achievements over the past 12 months



PYC's majority owned subsidiary, Vision Pharma Pty Ltd, is progressing a lead candidate that has been demonstrated to reverse a form of Retinitis Pigmentosa in human cells in a key functional study (see ASX announcement of 1 October for more details). Funding implications are estimates only and based on assumptions including maintenance of the R&D rebate system. 2

1 Progress our Retinitis Pigmentosa program to market



PYC's delivery platform
+
PYC's drug

Our target market is estimated at \$1bn p.a.

2

Expand into new indications (either alone or in partnership)



PYC's delivery platform
+
PYC's drug

Or

PYC's delivery platform
+
Licensee's drug

We have two scalable platform technologies:
- RNA therapeutics design capability; and
- An intracellular delivery technology

We have two important milestones to deliver in the near future

Program



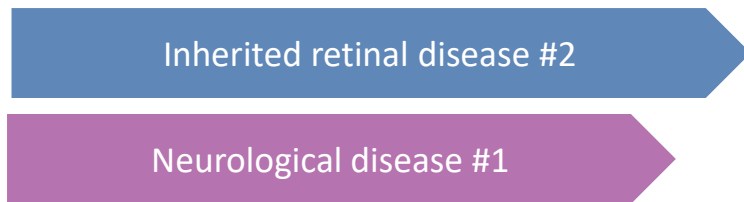
Ocular



Major milestones in the near future

- ★ 1. Efficacy read-outs in Q1 2020
- ★ 2. First in human results 2021

More programs in development

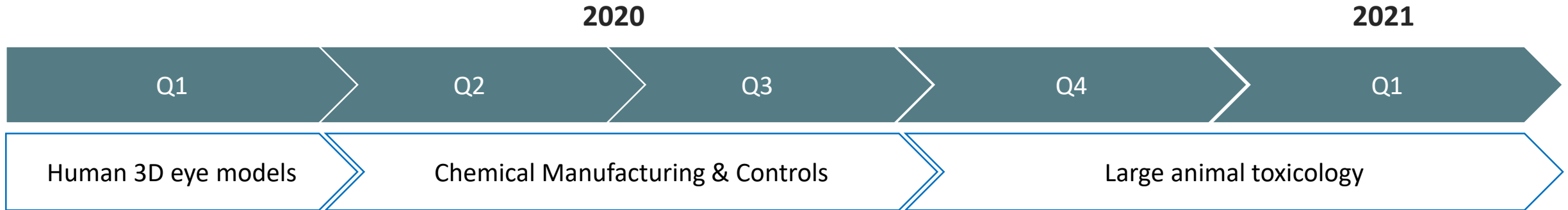


Engaging with US regulator

Establishing US office in H1 2020

We have a clear set of objectives to deliver over the coming 18 months to take us into clinical evaluation

Major developmental milestones for our lead Retinitis Pigmentosa drug on the path to the clinic



- Can our drug reverse the disease in two critical read-outs:
 - Restore the cellular 'bridge' connecting the two cell layers involved in the disease; and
 - Restore the ability of diseased cells to remove toxic waste products
- Confirm the ability to manufacture our drug at commercial scale and quality
- Is our drug safe at the desired dose:
 - Proof of concept toxicity studies in rats
- Is our drug safe at the desired dose:
 - Assess the toxicity profile of our lead candidate in one large animal species (rabbit)
- Is our drug safe at the desired dose:
 - Assess the toxicity profile of our lead candidate in a second large animal species (dog or non-human primate)

Financial Information (21 November 2019)

Share price	\$0.057
Number of shares	2,931M
Market Capitalisation	\$167M
Cash (21-Nov-19)	\$32M
Debt (21-Nov-19)	Nil
Enterprise Value	\$135M

Source: IRESS

Note:

1 Excludes 10m unlisted options exercisable at A\$0.06 before 30 May 2020

2 Cash includes funds held by 90% owned subsidiary Vision Pharma Pty Ltd

Board of Directors

Alan Tribe – Chairman
Dr Rohan Hockings – Executive Director
Dr Bernard Hockings – Non-Executive Director

Share price performance (1 year)

Share price (AUD)

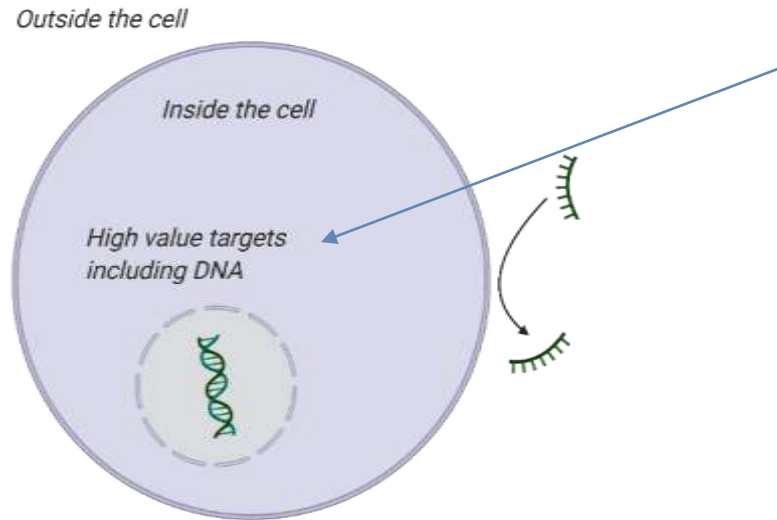
Volume (m)



Top shareholders

	%
Alan Tribe	24.8%
Dr Bernard Hockings	13.0%
Sietsma Holdings	9.7%
Anthony Barton	5.0%

Solving the 'delivery challenge' opens the door to new treatments and breakthrough medicines



Opportunity

Highest value drug targets exist inside cells

Challenge

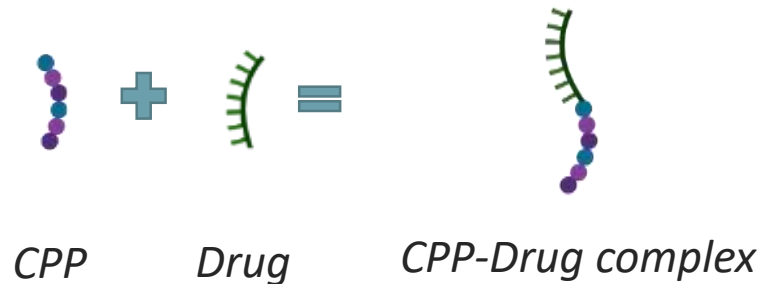
But... The cell membrane has evolved over hundreds of millions of years to **keep foreign substances out (like drugs)**

Many emerging therapeutics fail due to an inability to reach their target

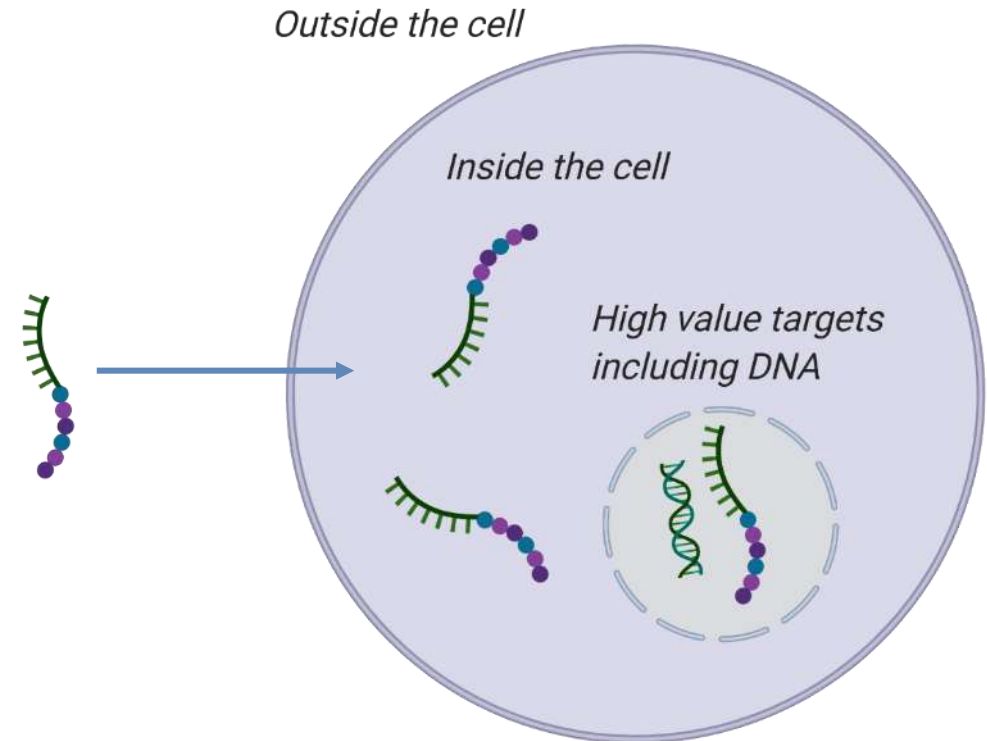
PYC Therapeutics solves the delivery challenge with our Cell-Penetrating Peptide (CPP) technology

PYC Therapeutics' solution

PYC's Cell Penetrating Peptides (CPPs) **cross the cell membrane** and can be **joined to a drug cargo** to deliver it **inside the cell**



Precision medicine is now a reality



“If you have a leaking faucet in your kitchen, today’s drugs work by mopping up the floor; we shut off the spigot”

Key points

- Retinitis Pigmentosa (RP) is the leading cause of childhood blindness
- Children with RP lose their night vision before progressing through peripheral visual loss and ultimately to blindness
- PYC are developing a treatment that has reversed this disease process in human cells
- We are working with world-leading experts in the design of precision medicines (Prof. Sue Fletcher) and the eye (Lions Eye Institute) to advance this drug into human trials

Normal vision



Vision with Retinitis Pigmentosa



Why does this matter? A human example (2/3)

Cell type:

Healthy cells

Diseased cells

Diseased cells

Diseased cells

Treatment:

None

None

Drug alone

Delivery + Drug

Illustration:

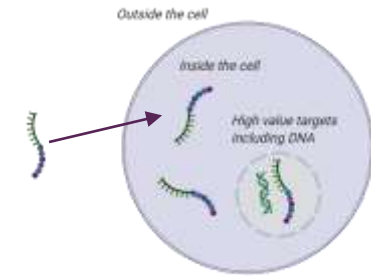
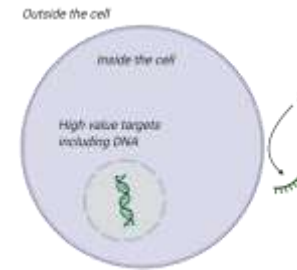
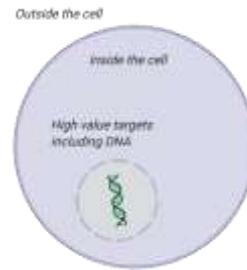
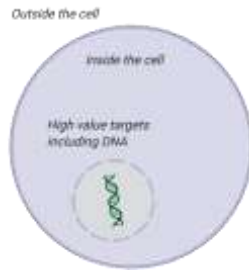
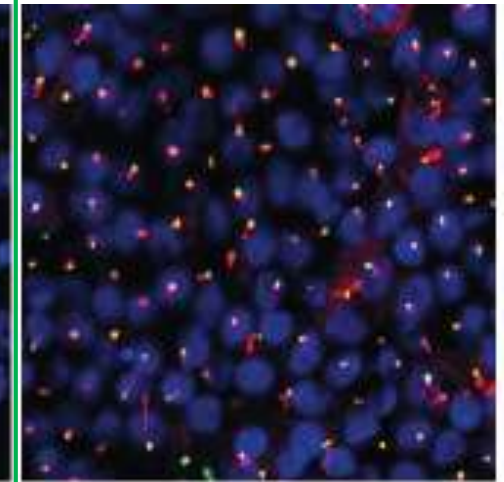
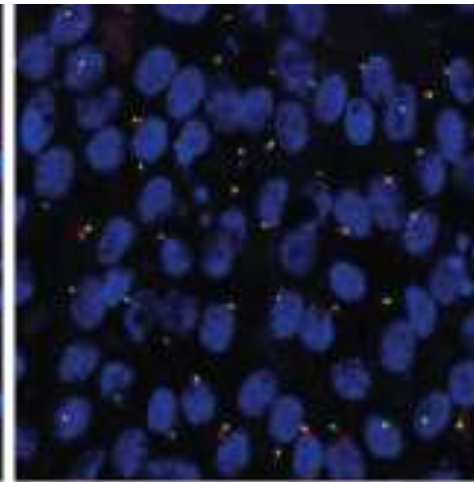
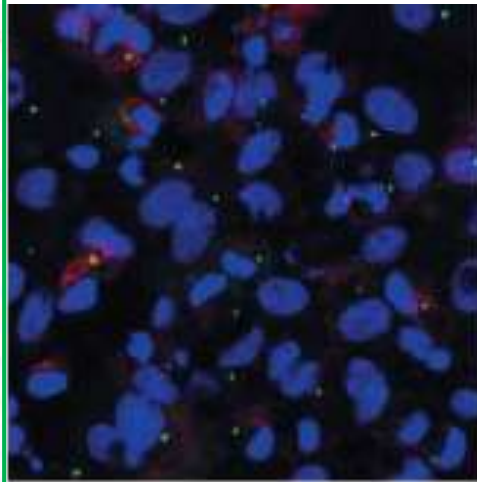
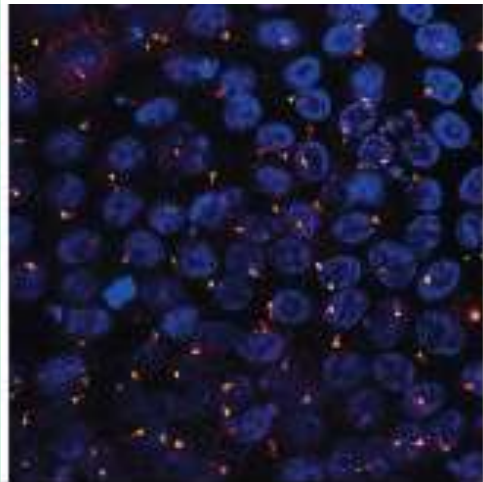


Image of actual human cells:



PYC's 'delivery + drug' solution reverses the disease process and restores the cilia (in red) essential for normal cell function in humans

Milestone

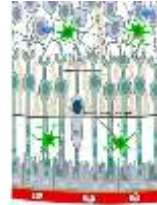
Animal models

Human cells

3D 'retina in a dish' models

Humans

Patient impact and Revenue



PYC's lead drug program...

Is **4x more effective** in animals than our nearest competitor

Has **reversed our target disease** in human cells...

Has proven to be **highly effective in 3D models of human retinas** (made from human stem cells)

Will prove effective in **clinical trials?**

Will create the **first treatment** for children with a form of Retinitis Pigmentosa and **capture a \$1bn p.a. market?**

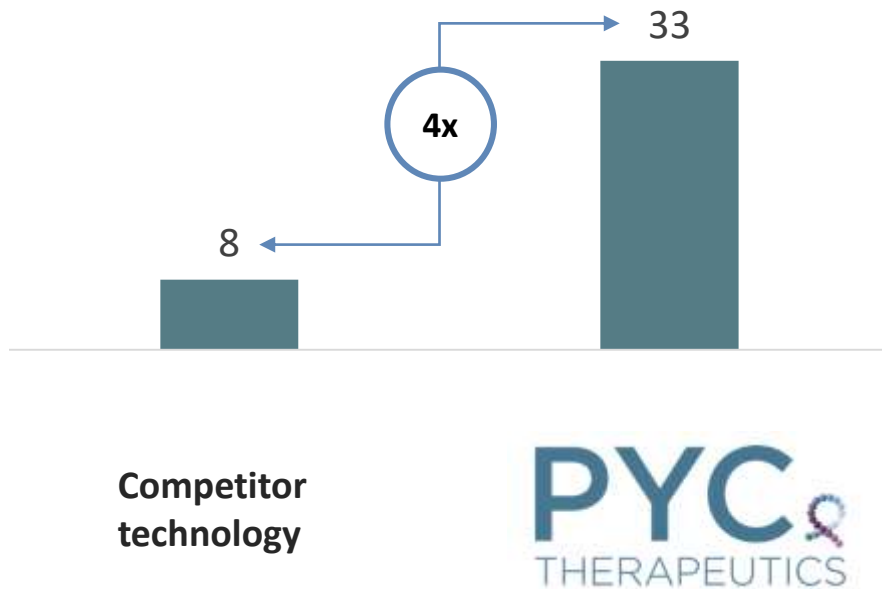
Outcome



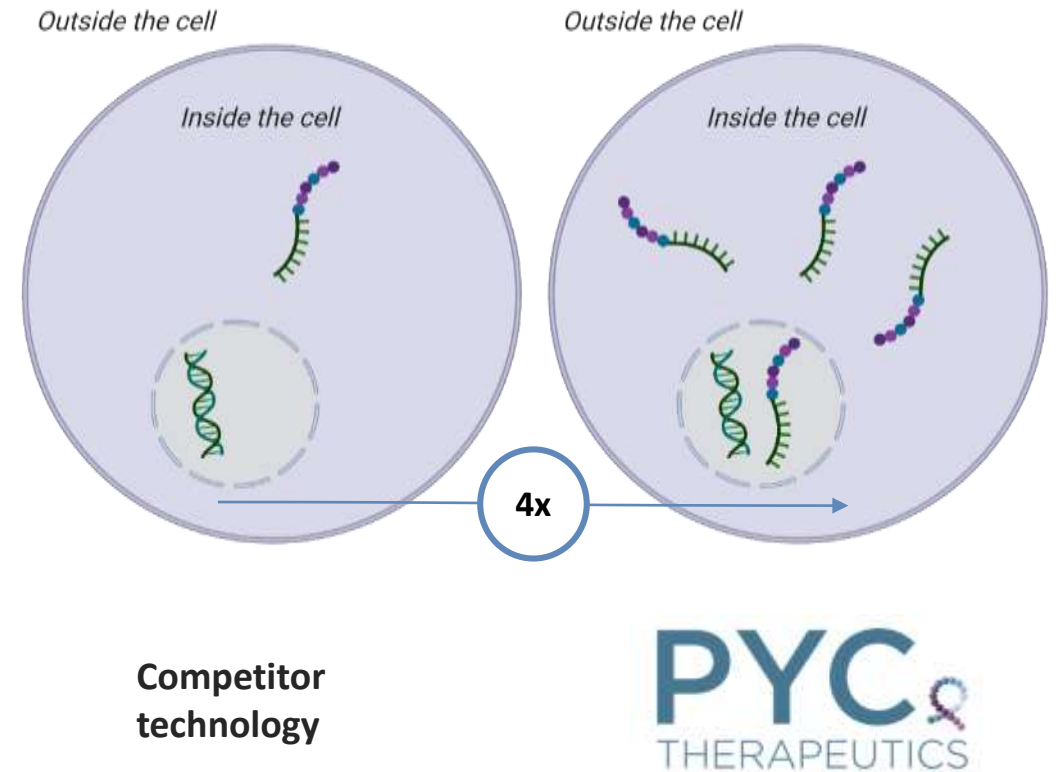
PYC has a clear competitive advantage in the amount of drug cargo that we can deliver

PYC's delivery technology delivers 4x more drug cargo inside cells than our nearest competitor's

% of cells with drug successfully delivered¹



Getting enough drug cargo inside the cell is the rate-limiting step in the development of precision drugs



PYC's competitive advantage has been proven in both animals and human cells

See ASX announcement 'Animal Models – 400% outperformance of gold standard' from the 23/07/2019 and ASX announcement 'Phylogica's Technology is Effective in Human Cells' from the 6/08/2019

¹ A competitive read-out of exon skipping in retinal pigment epithelium (RPE)/choroid cells demonstrating 410% outperformance of PYC's CPP over benchmark (RXR)4 7 days post-administration of a single dose of 1.6 micrograms CPP-ASO per eye. The ASO is Survival of Motor Neuron 1 and the outcome measured is successful exon skipping.

We drive shareholder returns through two commercial applications of our delivery 'platform'

1 Development of PYC's own pipeline of drugs



PYC's delivery platform
+
PYC's drug

- Develop PYC's own drug cargoes for our initial area of focus - Genetic Eye Diseases

2

Licensing
PYC's
delivery
platform
and RNA
programs

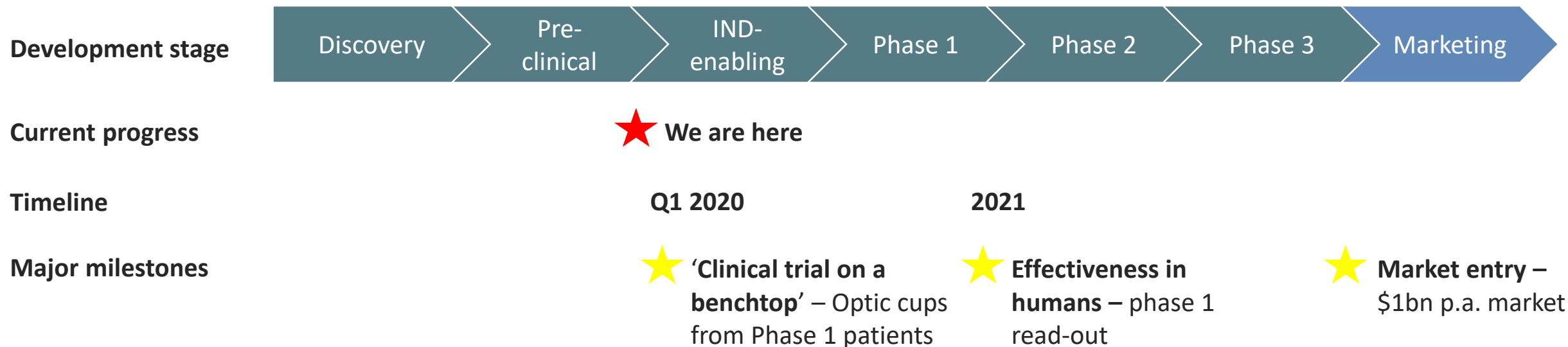


PYC's delivery platform
+
Licensee's drug

- License our delivery technology or RNA therapeutics using our delivery technology to Pharma/Biotech companies and **generate revenue from fees, milestones and royalties**

① Our lead program has major de-risking events immediately ahead with assessment in 3D models of multiple patient retinas in Q1 2020

Lead drug program – Retinitis Pigmentosa



PYC's success to date sets us on a path to make a major difference for patients across a range of inherited retinal diseases



Success in animal models
Both efficacy and toxicology



Success in 3D human retina model
Organoid or "retina in a dish" model demonstrates effectiveness



Serving unmet need
Opportunity to combine phases 2/3 in clinical trials



Success in human cells
Proof of concept established



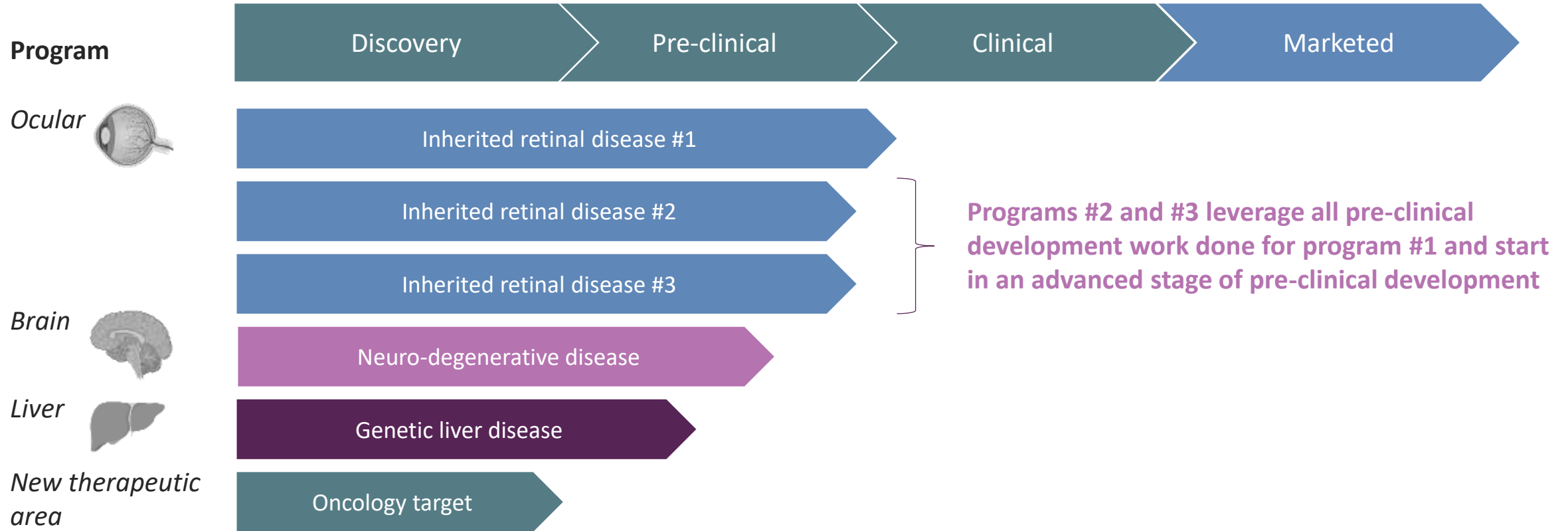
Success from similar drugs
ASOs in other inherited retinal diseases are clinically validated



Accessible patient population
Disease registries assist distribution

② Our technology scales rapidly and is capable of supporting both internal programs and out-licensing opportunities

Developmental stage of PYC and Partner's pipeline in 2020



“Haven’t heard of RNA Therapeutics yet? You will”¹

PYC trades substantially below the valuation of our peers



Eye disease landscape examples

Antisense Oligo landscape examples



Geographic base



Australia



US



US



Netherlands



US

Platform or asset

Platform

Platform

Asset

Asset

Platform

Development stage

Pre-clinical

Clinical (Phase 1)

Clinical (Phase 2)

Clinical (Phase 1b)

Pre-clinical

Lead indication

Ocular rare disease

Wet AMD

Ocular immunotherapy

Ocular rare disease

Neurological rare disease

**Cash reserves (AUD)
Latest Quarter**

~\$32M

~\$89M

~\$295M

~\$200M

~\$340M

**Market Cap (AUD)
as at 20 Nov 2019**

~\$167M

~\$1,660M

~\$2,700M

~\$485M

~\$1,150M

We have a world-class scientific team

Scientific Advisory Board



Prof. Judy Lieberman
MD, Ph.D
Professor of Pediatrics at
Harvard Medical School
*First-class University
board representation*



Stephen Doberstein
B.Sc.Ch.E, Ph.D
Chief Research &
Development Officer at
Nektar Therapeutics
*17 years experience in
biotechnology*

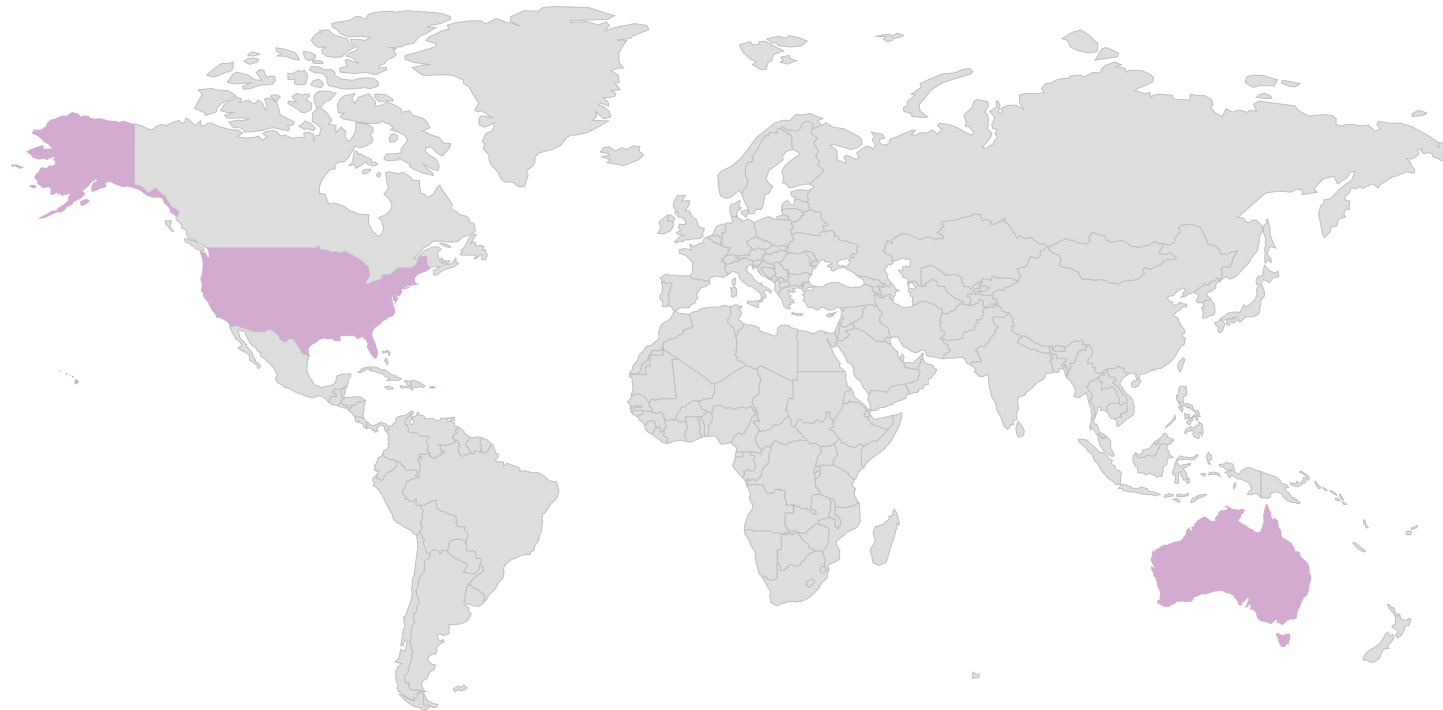


Rakesh Veedu Ph.D
Head of precision nucleic
acid therapeutics
research at the **Centre
for Comparative
Genomics**
Expert in antisense oligos

Ophthalmology Advisory Board



Fred K. Chen
MBBS (Hons), Ph.D, FRANZCO
Clinician and leader of Ocular Tissue Engineering Laboratory at
Lions Eye Institute
*Expert in diagnosis and treatment of Inherited Retinal and Macular
Diseases, and clinical trials for ophthalmic indications*



Operational Team



Rohan Hockings
MBBS (Hons.), JD GDLP
*Experience across both
clinical and commercial roles*



Prof. Sue Fletcher
Ph.D, B.Sc
*Leading global expert in RNA
therapeutics, co-inventor of
Eteplirsen for DMD*



Kaggen Ausma
LLB, B.Econs (Hons.)
*Previous roles in McKinsey &
Co and CLSA Asia-Pacific*



Katrin Hoffmann,
Ph.D, B.Sc
*20 years experience in
biomedical research*



Science Team
*23 Scientists based at the
Harry Perkins Institute of
Medical Research*

Key collaborators



*Clinical expertise in the eye, ocular tissue
engineering, and patient engagement*

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