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Investor Relations Presentation

October 2019

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Financial Information (11 October 2019)

Share price	\$0.055
Number of shares	2,450M
Market Capitalisation	\$135M
Cash (30-Jun-19)	\$6M (pre R&D rebate)
Debt (30-Jun-19)	Nil
Enterprise Value	\$129M

Source: IRESS

Note:

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

Board of Directors

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

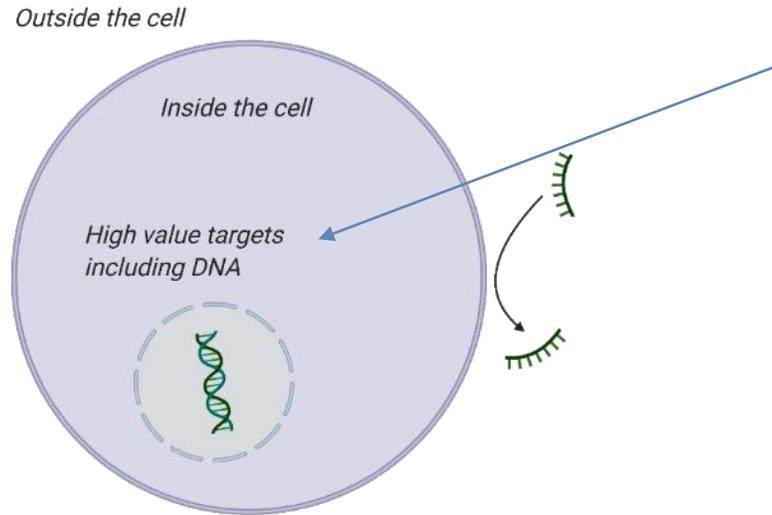
Share price performance (1 year)



Top shareholders

	%
Alan Tribe	22.9%
Dr Bernard Hockings	14.9%
Sietsma Holdings	10.9%
Anthony Barton	6.0%

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)**

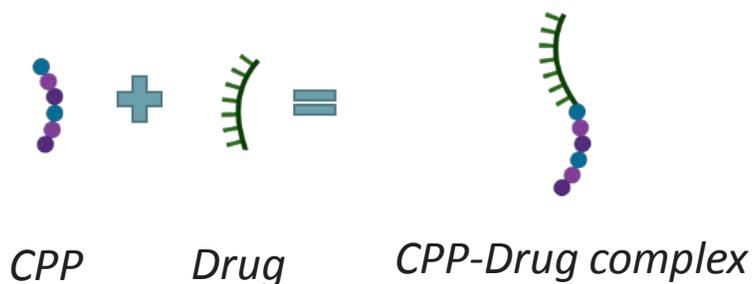
Many emerging therapeutics fail due to an inability to reach their target

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

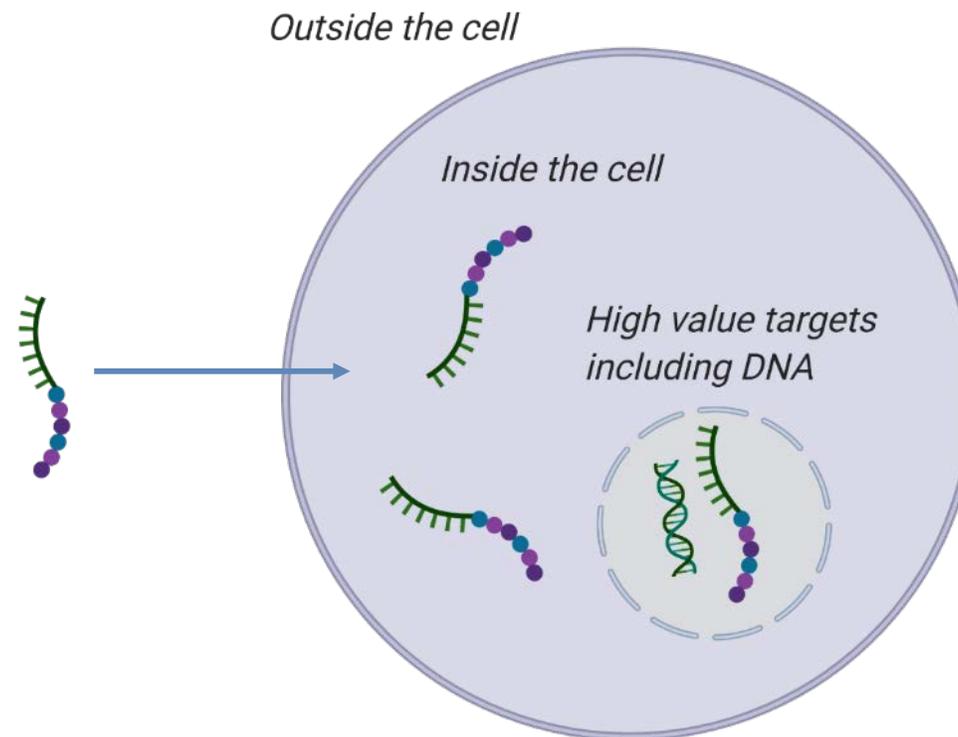
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PYC Therapeutics' solution

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



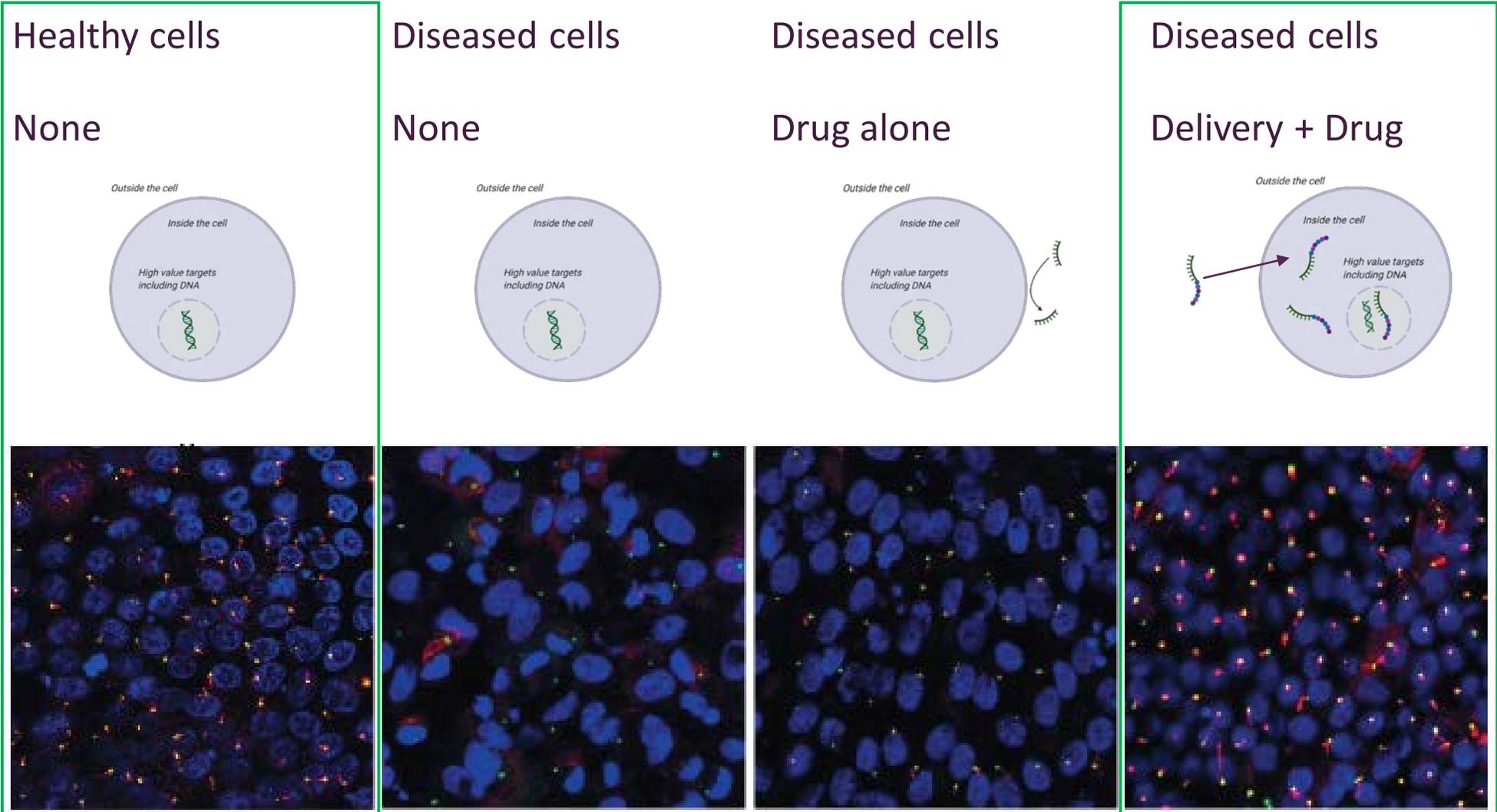
Why does this matter? A human example (2/3)

Cell type:

Treatment:

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

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

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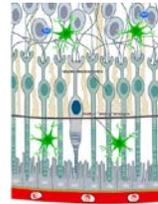
Milestone

Animal models

Human cells

3D 'retina in a dish' models

Humans



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?**

Outcome



Patient impact and Revenue



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

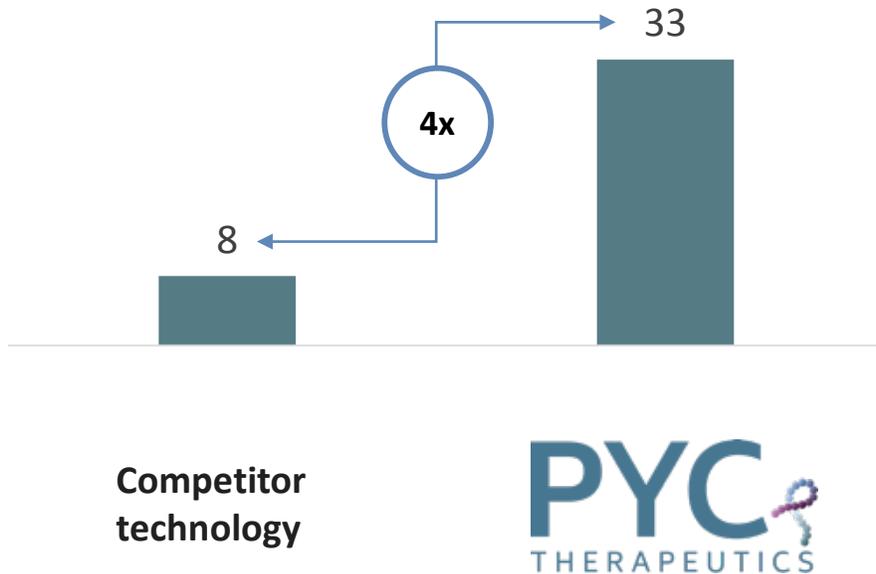
PYC has a clear competitive advantage in the amount of drug cargo that we can deliver



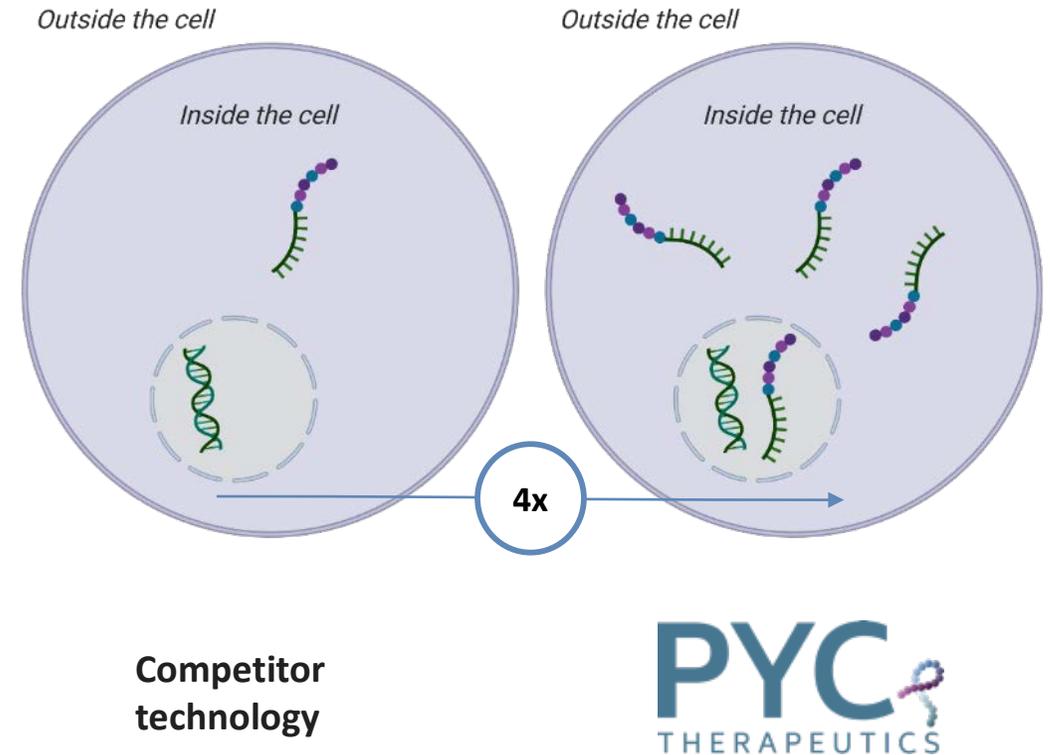
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PYC's delivery technology delivers 4x more drug cargo inside cells than our nearest competitor's

% 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 splicing 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'

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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 human cells
Proof of concept established



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



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



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



Accessible patient population
Disease registries assist distribution

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

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Developmental stage of PYC and Partner's pipeline in 2020

Program



Ocular



Programs #2 and #3 leverage all pre-clinical development work done for program #1 and start in an advanced stage of pre-clinical development

Brain



Liver



New therapeutic area



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

¹ Joshua Peters, Massachusetts Institute of Technology

PYC trades substantially below the valuation of our peers



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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) as at 30 June 2019	~\$10M	~\$120M	~\$260M	~\$140M	~\$350M
Market Cap (AUD) as at 26 August 2019	~\$130M	~\$580M	~\$2,500M	~\$415M	~\$1,600M

¹ PYC Cash as at 1 Jul 2019 including FY2019 R&D rebate estimated to be worth \$3m; All company Cash from 10-Q SEC filing. Market Cap from NASDAQ listings
 Note: all figures in AUD (0.715 AUD:USD)

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*

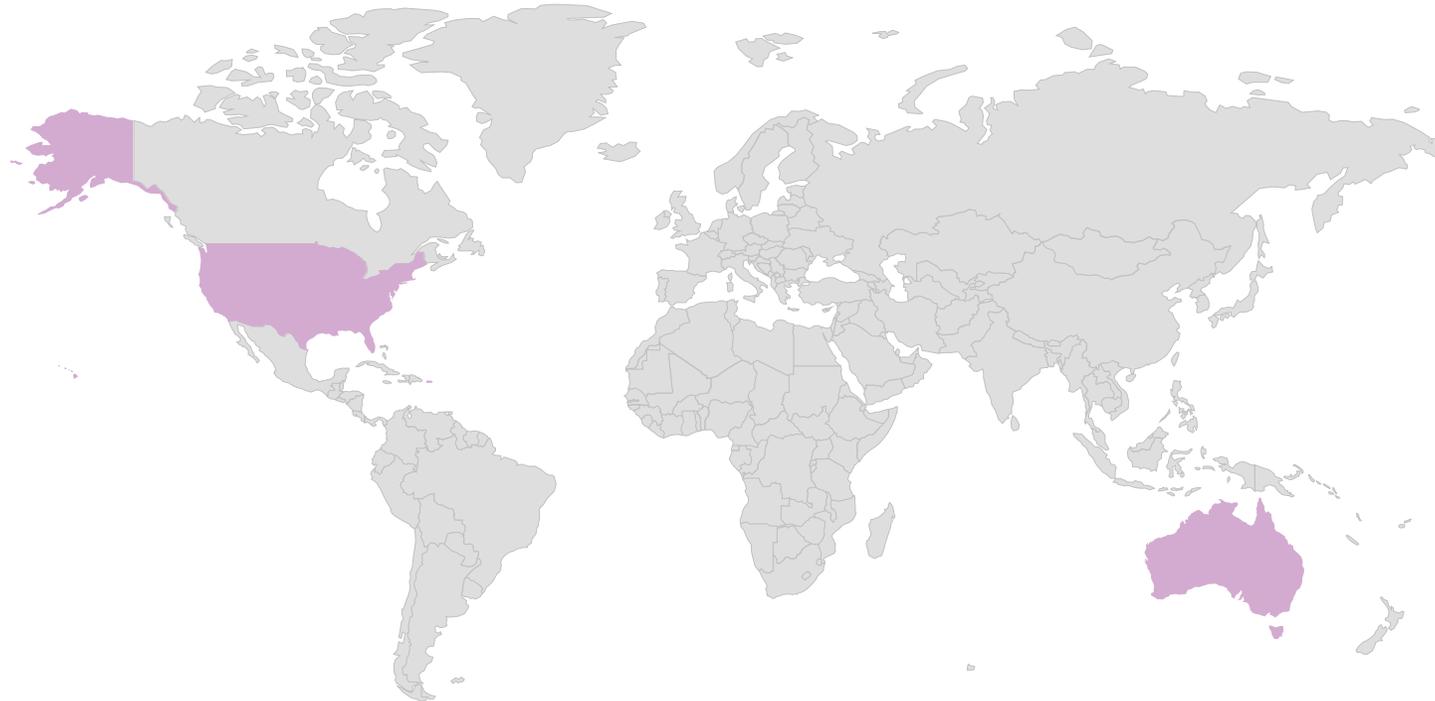


Rakesh Veedu Ph.D
Head of precision nucleic
acid therapeutics
research at the **Centre
for Comparative
Genomics**
Expert in antisense oligos

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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