PYC THERAPEUTICS

ASX ANNOUNCEMENT

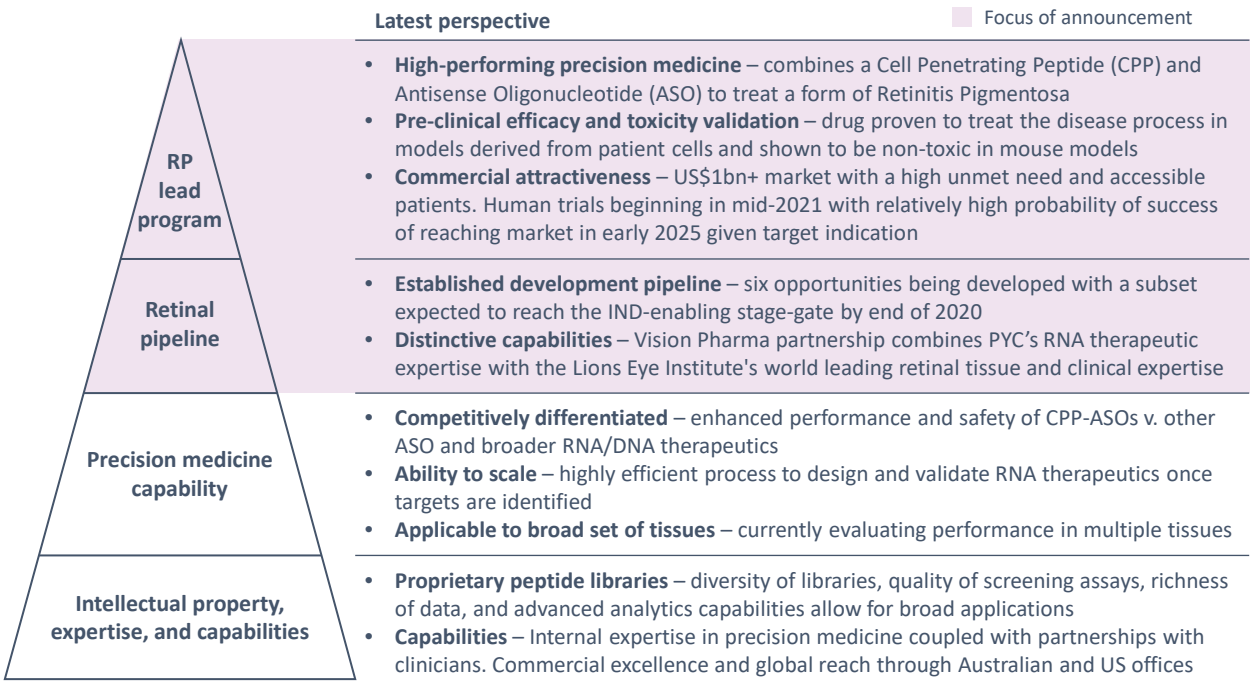
8 April 2020

Successful toxicity results confirm safety advantage of PYC's lead program and broader drug delivery platform

Highlights

- PYC has continued to de-risk its lead program by demonstrating the safety of its delivery technology in mouse models. These toxicity results, along with the recently announced efficacy results, increase the program's probability of success as it progresses into clinical trials in 2021
- The proven safety of PYC's delivery technology also increases the probability of success for PYC's broader retinal pipeline, as the technology will be leveraged across this full set of opportunities
- The toxicity studies highlighted the competitive advantage of PYC's delivery technology, as it outperformed the current benchmark for clinical development of this type of drug delivery

Overview of PYC Therapeutics

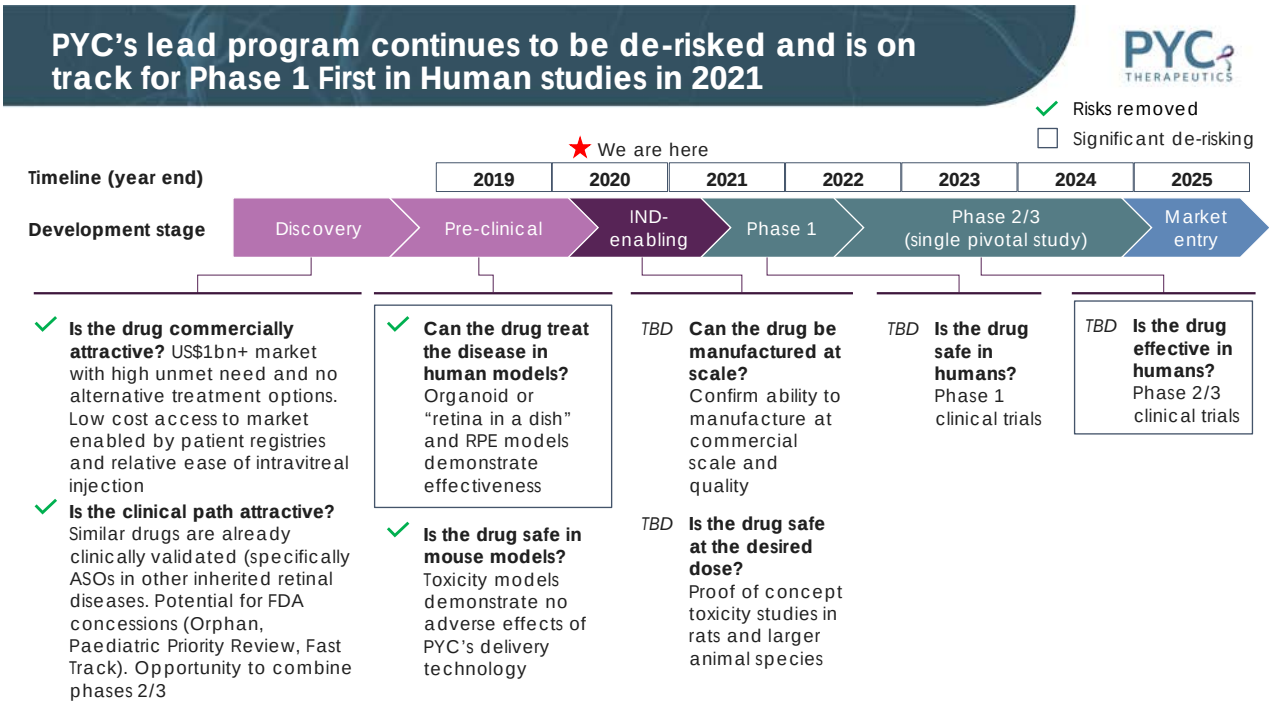


Announcement

PYC recently announced that our lead drug for the treatment of a form of retinitis pigmentosa successfully corrects the disease in models derived from patients with the condition (see ASX announcement of 1 April 2020). PYC now announces that our delivery technology is further competitively differentiated by virtue of its safety (toxicity) profile.

Impact on lead program – PYC's lead drug development program utilises the specific drug delivery technology assessed in these toxicity models. Demonstrating the safety of the drug's delivery peptide further de-risks the program as it continues towards clinical trials in 2021. Figure 1 illustrates how the toxicity results and the recently announced efficacy results contribute to the de-risking of the program.

Figure 1

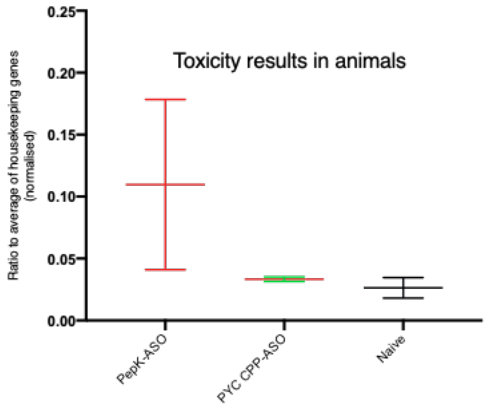


Impact on retinal pipeline – The eye is an extremely sensitive organ, meaning that drugs designed to treat diseases within it must be non-toxic. PYC's results provide important evidence of the safety of our delivery technology, which is being leveraged across our retinal drug pipeline. The toxicity results described below include a comparison between PYC's technology and a competitive drug delivery technology used as a reference molecule for drug programs currently in clinical development. PYC's outperformance against the current clinical benchmark highlights an important competitive advantage underlying PYC's pipeline of RNA therapeutics.

Results

Figure 2 illustrates the safety of PYC's delivery technology. The chart contains the toxicity results for: i) PepK – a third-party delivery peptide that serves as the current benchmark for delivery peptides in clinical development (Red, n=6); ii) PYC's delivery peptide (Green, n=2[1]); and iii) a control group which received no treatment (Black, n=3). PYC's peptide is substantially less toxic than PepK and displays no significant difference to the retinal stress levels seen in the untreated group[2].

Figure 2



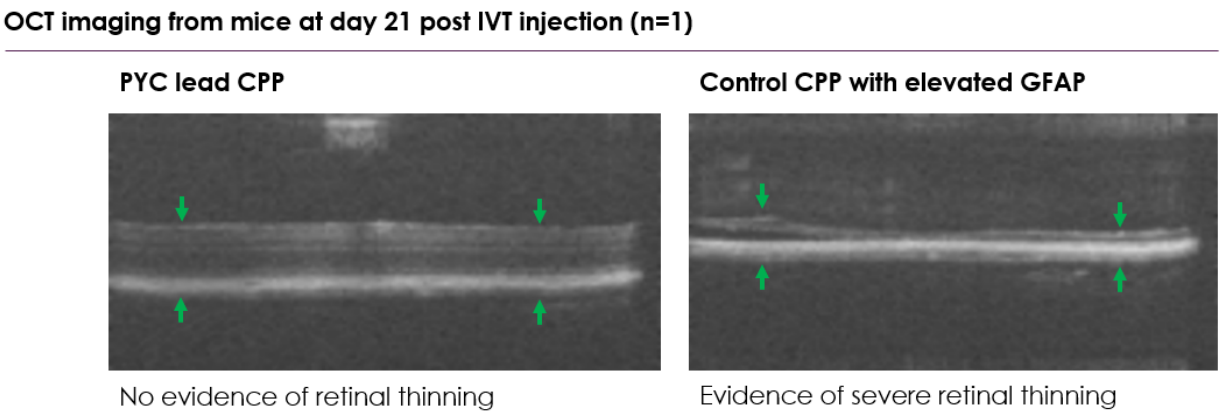
Technical notes: Toxicity determined by treating mouse retinas with 1.6 micrograms of an Antisense Oligonucleotide (ASO) delivered by each peptide and then measuring retinal stress based on levels of Glial Fibrillary Acidic Protein (GFAP). GFAP levels have been measured after retinal harvesting from mice at day 5 post intravitreal injection and normalised to a pool of 'house-keeping' genes. The higher the GFAP levels, the greater the stress response of the retina (i.e., lower values indicate less stress and hence less toxicity).

Figure 3 provides further evidence of PYC's safety advantage. Elevations in toxicity markers (GFAP levels) correlate with 'thinning' of the retina in animals. This result is presumed to be a consequence of cellular death and subsequent compression of the layers of the retina. Figure 3 illustrates how PYC's lead CPP shows no evidence of retinal thinning compared to a CPP that elevates GFAP levels and consequently causes retinal thinning.

[1] An additional data set of 6 samples yielding a very similar reading were excluded due to being harvested at day 7 rather than day 5 post-injection

[2] One-way ANOVA p values – PepK:naïve 0.1379; PYC CPP:naïve 0.9892

Figure 3



Technical notes: Optical Coherence Tomography (OCT) images of mouse retina with and without elevated GFAP levels following intravitreal (IVT) injection of a Cell Penetrating Peptide (CPP) – Antisense Oligonucleotide (ASO) conjugate.

Comments

PYC CEO Doug Huey commented: '*These results mark another important milestone as we derisk our lead program. More broadly, the results are an encouraging sign that we can develop safe therapeutics across a range of indications in the eye, and that our delivery technology is truly differentiated.*'

This ASX announcement was approved and authorised for release by the Board of PYC Therapeutics Limited.

ENDS For further information, please contact:

INVESTORS
Kaggen Ausma
CBO
info@pyctx.com

About PYC Therapeutics

PYC Therapeutics (ASX: PYC) is a drug development company solving a major challenge in the development of a revolutionary new class of drugs – delivering large drugs into cells. Cell Penetrating Peptides (CPPs) can overcome 'the delivery challenge' and provide access for a wide range of potent and precise drug 'cargoes' to the 'undruggable genome' – the highest value drug targets that exist inside cells. PYC Therapeutics is using its CPP platform to develop a pipeline of novel therapies with an initial focus on inherited retinal diseases.

Forward looking statements

Any forward-looking statements in this ASX announcement have been prepared on the basis of a number of assumptions which may prove incorrect and the current intentions, plans, expectations and beliefs about future events are subject to risks, uncertainties and other factors, many of which are outside the Company's control. Important factors that could cause actual results to differ materially from assumptions or expectations expressed or implied in this ASX announcement include known and unknown risks. Because actual results could differ materially to assumptions made and the Company's current intentions, plans, expectations and beliefs about the future, you are urged to view all forward-looking statements contained in this ASX announcement with caution. The Company undertakes no obligation to publicly update any forward-looking statement whether as a result of new information, future events or otherwise.

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Tel: +61 8 6151 0994

pyctx.com

PYC Therapeutics

ACN 098 391 961