

## Quarterly Shareholder Update

Phylogica Limited, trading as PYC Therapeutics, (ASX: PYC) ('The Company' or 'PYC') has successfully delivered a series of significant milestones in the third quarter of 2019 (Q3).

**Q3 was a tipping point for the Company where PYC started the quarter as a drug delivery Company and ended it as a drug development Company.** Going forward the focus will be on driving the lead program into clinical development, being a treatment for Retinitis Pigmentosa, the leading cause of childhood blindness.

Q3 saw three elements of the pre-clinical data pack successfully realised including:

- i) Animal model data demonstrating the competitive advantage of PYC's delivery technology (see ASX announcement of 23 July 2019) with 400% more drug effectively delivered with PYC's technology than with the current industry 'gold-standard' delivery technology;
- ii) The first evidence that PYC technology is capable of reversing a disease process in human cells (see ASX announcements of 6 August and 1 October 2019); and
- iii) Demonstrating the durability of response to a drug using PYC delivery technology over time (see ASX announcements of 22 August and 25 September 2019) with sustained drug efficacy over a 4 week period after a single low dose.

Each of these outcomes represent an important piece of the puzzle in the creation of a high impact precision medicine. The significance of this progress was highlighted when the Company announced a strategic partnership with Lions Eye Institute of Western Australia (LEI). The future collaboration will develop a precision drug to address the leading cause of childhood blindness.

The company is pursuing multiple paths to commercialisation, including:

- i) **Pipeline development**  
*taking precision medicines to market;*
- ii) **Licensing of precision medicines that can now be created internally**  
*designing drugs for others to take to market; and*
- iii) **Drug delivery licensing options**  
*licensing PYC delivery technology to third parties for use with their own drugs*

### **i) Pipeline development** (taking precision medicines to market)

PYC has materially enhanced its ability to build shareholder value by formalising its agreement with the Ocular Tissue Engineering Laboratory at LEI. Importantly, LEI provide PYC with the necessary expertise to conduct clinical trials of the drugs that can now be developed 'in house' (see 'Precision medicine platform' below).

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Preparations for the Company's first clinical trial in partnership with LEI are now well underway. Potential phase 1 trial participants have donated skin samples that LEI will use to create 'optic cup'/'retina in a dish' models for assessment of PYC's lead drug molecule. This is scheduled to occur in the first quarter of 2020. Reversal of the disease process in these 'optic cup'/'retina in a dish' models will provide a strong indication of success. The patients from whom these 3-dimensional models were created may again be involved when the phase 1 clinical trial begins.

The path to clinical development for PYC's flagship Retinitis Pigmentosa lead drug program can be replicated rapidly in other inherited retinal diseases. The Company is now progressing additional early stage programs to expand its pipeline.

**ii) Licencing of Precision medicines created internally** (designing drugs for others to take to market)

PYC has now moved from focusing solely on its drug delivery technology platform to being a drug development Company.

The Company has made a number of appointments, including Professor Sue Fletcher as Chief of R&D. This creates the capability for PYC to develop Anti-Sense Oligonucleotides (ASOs) to combine with PYC's drug delivery technology to develop a class of drug called an 'RNA therapeutic'. This class of precision medicine is gaining significant traction due to the advantages it offers over alternative classes of therapeutic including DNA therapies (eg. CRISPR and gene therapy).

The ability to design RNA therapeutics that couple PYC's proprietary delivery platform has been enhanced by the clinical development expertise flowing from the collaboration with LEI.

PYC is now positioned to take multiple drugs from 'bench to bedside'.

Where the Company does not have the capacity to advance precision medicines developed in-house, it will consider licencing arrangements with third parties. It is important for the Company to focus on its lead development program and recognize its resource limitations.

**iii) Drug Delivery Licencing Options** (licensing our delivery technology)

The Company has undertaken a substantial body of work to refresh the Intellectual Property (IP) protection that we have over its delivery platform as it realises the long-held promise of being incorporated into drug molecules entering clinical development.

PYC has built a substantial data set of Cell Penetrating Peptide (CPP) performance both *in vitro* (in a test tube) and now also *in vivo* (in an animal). The Company has developed sufficient data to 'train' a machine learning algorithm on what features of the CPP drive higher effectiveness and lower toxicity. This powerful new technique has been used to inform a refreshed patent claim that leverages the insight of the computing power. This approach brings broad IP protection around the properties of the CPPs that achieve both high effectiveness and low toxicity.

Within PYC's core capability of delivering drugs inside cells, the 'IP clock' has been re-started.

## Upcoming milestones

What lies ahead is an exciting path both to and through the clinic. This journey will include:

- i) A final, and additional assessment of PYC's lead drug's ability to reverse a disease process in human cells that have the target disease (Retinitis Pigmentosa) – known as a 'phagocytosis assay', this provides an assessment of whether our drug can restore the cells' ability to rid itself of toxic build up (anticipated in Q1 2020);  
*This result builds on the highly encouraging results in human cells already completed*
- ii) A 'clinical trial on a benchtop' with 'optic cups'/'retinal organoids' from patients likely to be enrolled in our phase 1 study (anticipated in Q1 2020); and
- iii) Initiation of IND-enabling studies demonstrating the safety of the lead drug candidate in larger animal species (anticipated to begin in Q2 2020).

The results of these first two read-outs will provide significant insight into the clinical success. They will have substantial implications for the value of the Retinitis Pigmentosa drug program, and confirm our proof of concept results in the animal models and human cells reported to date. Positive results from these two models, with the already highly encouraging results to date, will lay the foundation for rapid progression through clinical development and to PYC's final goal of positively impacting patients lives.

**ENDS** For further information, please contact:

### INVESTORS

Rohan Hockings  
CEO  
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## About PYC Therapeutics

*Phylogica Limited trading as 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.

This ASX announcement should not be relied on as a recommendation or forecast by the Company. Nothing in this ASX announcement should be construed as either an offer to sell or a solicitation of an offer to buy or sell shares in any jurisdiction.

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**Phylogica Limited trading as PYC Therapeutics**

ACN 098 391 961

## Appendix 4C

### Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

**Name of entity**

PHYLOGICA LIMITED

**ABN**

48 098 391 961

**Quarter ended ("current quarter")**

30 SEPTEMBER 2019

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) research and development	(1,492)	(1,492)
(b) product manufacturing and operating costs	-	-
(c) advertising and marketing	-	-
(d) leased assets	-	-
(e) staff costs	(173)	(173)
(f) administration and corporate costs	(449)	(449)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	23	23
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 R&D Rebate	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(2,091)</b>	<b>(2,091)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment <i>(Re-location to Harry Perkins Institute)</i>	-	-
(b) businesses (see item 10)	-	-
(c) investments	-	-
(d) intellectual property	-	-
(e) other non-current assets	-	-

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Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
2.2 Proceeds from disposal of:		
(a) property, plant and equipment	-	-
(b) businesses (see item 10)	-	-
(c) investments	-	-
(d) intellectual property	-	-
(e) other non-current assets	-	-
2.3 Cash flows from loans to other entities	-	-
2.4 Dividends received (see note 3)	-	-
2.5 Other (provide details if material)	-	-
<b>2.6 Net cash from / (used in) investing activities</b>	<b>-</b>	<b>-</b>
<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of shares	-	-
3.2 Proceeds from issue of convertible notes	-	-
3.3 Proceeds from exercise of share options	-	-
3.4 Transaction costs related to issues of shares, convertible notes or options	-	-
3.5 Proceeds from borrowings	-	-
3.6 Repayment of borrowings	-	-
3.7 Transaction costs related to loans and borrowings	-	-
3.8 Dividends paid	-	-
3.9 Other (provide details if material)	-	-
<b>3.10 Net cash from / (used in) financing activities</b>	<b>-</b>	<b>-</b>
<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1 Cash and cash equivalents at beginning of quarter/year to date	6,181	6,181
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(2,091)	(2,091)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4 Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5 Effect of movement in exchange rates on cash held	-	-
<b>4.6 Cash and cash equivalents at end of quarter</b>	<b>4,090</b>	<b>4,090</b>

5. <b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1 Bank balances	557	1,661
5.2 Call deposits	3,533	4,520
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>4,090</b>	<b>6,181</b>

6. <b>Payments to directors of the entity and their associates</b>	Current quarter \$A'000
6.1 Aggregate amount of payments to these parties included in item 1.2	116
6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

Directors Fees and Superannuation

7. <b>Payments to related entities of the entity and their associates</b>	Current quarter \$A'000
7.1 Aggregate amount of payments to these parties included in item 1.2	-
7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

8. <b>Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

N/A

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Research and development	2,130
9.2	Product manufacturing and operating costs	-
9.3	Advertising and marketing	-
9.4	Leased assets	-
9.5	Staff costs	180
9.6	Administration and corporate costs	320
9.7	Other	-
<b>9.8</b>	<b>Total estimated cash outflows</b>	<b>2,630</b>

10.	Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1	Name of entity	-	-
10.2	Place of incorporation or registration	-	-
10.3	Consideration for acquisition or disposal	-	-
10.4	Total net assets	-	-
10.5	Nature of business	-	-

### Compliance statement

- This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- This statement gives a true and fair view of the matters disclosed.



Sign here:  
(Company secretary)

Date: 30th October 2019

Print name: Kevin Hart

### Notes

- The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
- If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
- Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

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