

Appendix 4C and Quarterly Update

28 July 2020 – Perth, Australia: PharmAust Ltd (ASX:PAA), a clinical stage oncology company, is pleased to present its Appendix 4C Quarterly Report and Shareholders' Update for the period ended 30 June 2020.

The business has progressed very successfully on several fronts in the quarter under review.

Monepantel shows “remarkable” results against COVID-19

During the quarter, PharmAust entered into a Materials Transfer Agreement with the Walter and Eliza Hall Institute of Medical Research (“WEHI”) in Melbourne, Victoria, to test the effects of monepantel and monepantel sulfone on COVID-19 infections.

The results from this work investigating the effects of monepantel and monepantel sulfone on cells infected with SARS-CoV-2 in tissue culture have been very positive. Repeat cell culture work has confirmed the initial promising data, which showed that:

- Monepantel and monepantel sulfone treatment both reduce SARS-CoV-2 (COVID-19) cell-to-cell infectivity in cell culture;
- Virus infectivity was suppressed by approximately 95% in cell culture; and
- The quantities of monepantel required to inhibit virus infectivity were in the clinically acceptable range.

Walter and Eliza Hall Institute researcher Professor Marc Pellegrini (*MBBS BSc FRACP PhD FAHMS*), joint head of the Institute’s Infectious Diseases and Immune Defence division and an infectious disease clinician at the Royal Melbourne Hospital, stated “These exciting repeat results validate the results of the initial test and form strong grounds for progressing the drug to the next step. Demonstrating twice, that infectivity of SARS-CoV-2 virus particles can be suppressed by up to approximately 95% in cell cultures is a remarkable outcome.”

PharmAust, together with the Walter and Eliza Hall Institute, are conducting a comparative analysis on human pulmonary epithelial cells with MPL and other mTOR inhibitors, such as rapamycin and current anti-viral drugs authorised by the FDA for emergency use to treat COVID-19, such as remdesivir.

Once these assays are received, PharmAust will prepare an Executive Summary and an Investigator's Brochure to permit discussions with clinicians about a Phase I trial in a small number of human patients to treat COVID-19. Monepantel has already been evaluated in human patients with cancer (ASX announcement 21 October 2015), so human safety data is already available to facilitate the next steps.



Prof Marc Pellegrini – Walter and Eliza Hall Institute Head of Infectious Diseases and Immune Defence

Phase II Canine Trials

PharmAust achieved a successful outcome in the veterinary Phase II clinical trial investigating the effects of monepantel on dogs with treatment naïve B Cell lymphoma.

The Principal Investigator observed 100% survival rate during the trial (typically 50% of untreated dogs would not survive for 28 days). One pet dog achieved greater than 60% reduction in tumour burden, with one of its tumours completely disappearing within 14 days. The outcome provides a meaningful trend, comparing favourably with the treatment used in the original “liquid” monepantel formula reported on 3 December 2017.

Dr Richard Mollard, PharmAust’s Chief Scientific Officer, further commented “We had a number of key goals for this trial including:

- Determining the safety and efficacy of monepantel tablets as compared with the liquid formulation previously used in canine and human studies
- Evaluating the drug delivery capabilities of the newly developed monepantel tablets in pet dogs with cancer
- Deriving sufficient positive and indicative data to enable Phase III trials
- Producing sufficient data to enable further discussions with Vet Major with which PharmAust has an Option Agreement.

PharmAust considers that all these goals have been met”.

Dogs that have completed the 28 day trial have access to MPL tablets to continue treatment on the long-term maintenance dose. Vets are continuing to administer a low dose of MPL as a first line therapy to new dogs under a supplementary clinical study.

On 13 July 2020, PharmAust confirmed that the Final Report from the successful Phase II Canine Trial had been delivered, providing the opportunity for the MPL compound owner and option partner (Vet Major) to activate its 6-month exclusive option over the licensing of MPL for veterinary uses. Vet Major supported the Phase II trial by providing 25kg of MPL.



Gypsie successfully completed PharmAust’s 28 Day Phase II Canine Trial

Phase II Human Cancer Trial

PharmAust continues to make key steps towards progressing the evaluation of MPL in human trials.

PharmAust has submitted the MPL human trial paper for publication in a peer review journal describing the historic trial undertaken in Adelaide and the performance of MPL.

PharmAust has conducted further tablet formulation and pharmacokinetic studies aiming to increase uptake of monepantel into the blood and reduce tablet numbers for future human trials.

PharmAust currently has two separate batches of GMP-grade monepantel under stability studies testing the shelf-life of the formulation. These stability studies show a robust tablet and will support relevant submission filings to human trial ethics committees.

Depending on associated activities, PharmAust is currently aiming to conduct a third GMP manufacture program for monepantel tablets in or around quarter 3 of CY 2020 to cater for future human trials.

PharmAust is seeking to identify a suitable Clinical Oncology Unit to evaluate the new MPL tablet in humans in a Phase II trial, as a follow on from the Phase I clinical trial undertaken at the Royal Adelaide Hospital in 2015.

Current R&D

PharmAust is undertaking RNAseq profiling upon human cancer cell lines in vitro to investigate the mechanism of action of monepantel in autophagy/apoptosis causal to monepantel's anti-cancer effects. These studies aim to further dissect the involvement of mTOR signalling pathways in these processes which would allow further optimisation and flexibility in dosing for both vet and human therapy in future.

Epichem Pty Ltd (100% wholly owned subsidiary)

Epichem finished the Financial Year strongly, exceeding projected revenue forecast of AUD3.32M to achieve AUD3.54M. This is in light of the Unity Ltd contract coming to an end sooner than expected and the COVID-19 Pandemic.

The DNDi Medicinal Chemistry contract is on track and all deliverables have been achieved thus far. Epichem was acknowledged as the only consortium Medicinal Chemistry provider that was able to remain open and continue to provide services during the COVID-19 Pandemic as many other partners were more seriously impacted and affected.

The Pharmaceutical Reference Materials Business Unit also had strong performance for the quarter and year overall, exceeding its budget target.

Epichem's Chemistry Grade Hand Sanitiser has continued to be donated to healthcare and aged care providers in need. Some of the beneficiaries include Parkerville Children and Youth Care and a number of RSM Charity and Not for Profit Partners including the Cancer Council.

Epichem has increased its Business Development capability with Distribution Partners, BD Consultants, Lead Generation partners and the engagement of a Social Media and PR partner for the US, Europe, Asia and Australian Markets and has added additional internal resource for Marketing and Communications.

Epichem continues to support the PharmAust Drug Development Pipeline with Lead drug development and validation, drug candidate pipeline manufacture and analysis, drug reformulation, GMP synthesis and stability support as well as Drug inventory dispensing to clinical trial centres.

Epichem is involved in a series of COVID-19 Government related projects including the WA Innovation Hub initiative in relation to Smart Surface Chemistry chaired by former Australian of the Year, Dr Fiona Wood.

CEO, Colin La Galia has been invited to take part in the WA Government appointed Health and Medical Life Science Industry Reference Group sponsored by WA Health Minister, Roger Cook and Chaired by WA'S Chief Scientist, Professor Peter Klinken to develop an growth plan for the state's health and medical life science sector. Colin is a strong advocate for the Lifescience Biotech and R&D industry in Australia having completed a large number of interview and pod cast commitments.

Epichem has also expanded its suite of products and services beyond its current portfolio to include Material Science and IP technology to service the Energy, Resources and Agriculture sectors.

Epichem continues to pursue opportunities to create our own IP portfolio. This will also allow Epichem to maximise the R&D Tax incentive and partner with key stakeholders to accelerate commercialisation.



Dr Martine Keenan – Epichem Chief Scientific Officer

Appendix 4C – Quarterly Cash Flow Report

PharmAust's cash position at 30 June 2020 was \$2.9 million. The company is adequately funded to continue its current activities during these uncertain times and will continue to demonstrate appropriate fiscal restraint.

During the quarter, payments for Research and Development of \$0.136 million represented costs involved with the development of the Company's primary drug candidate, Monepantel (MPL) and salary allocations of Dr Richard Mollard who is 100% focused on R&D activities.

Payments for Product Manufacturing and Operating Costs represent wholly owned subsidiary Epichem Pty Ltd's expenditure allocated to manufacturing and operating.

Payments for Staff Costs represent salaries for laboratory, administration, sales and general management activities.

Payments for Administration and Corporate Costs represent general costs associated with running the Company, including ASX fees, legal fees, rent, etc.

The aggregate amount of payments to related parties and their associates included in the current quarter Cash flows from operating activities were \$0.161 million comprising Directors fees, salaries and superannuation.

Cash outflows for the quarter were in line with management expectations. The cash balance at 30 June 2020 amounted to \$2.9 million. Please refer to the attached Appendix 4C for further details on cash flows for the quarter and subsequent events outlined below.

Subsequent Events

The Company has issued 2,495,000 fully paid ordinary shares into the capital of the Company from the exercising of unlisted options. This has raised over \$1.4 million and strengthened the balance sheet.

Epichem received \$0.465 million in July 2020 from DNDi for work continuing on its flagship project on Chagas disease.

These funds are not included in this Appendix 4C as they were received after 30 June 2020.

The current cash at bank is approximately \$4.5 million.

This announcement is authorised by the Board.

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Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

PharmAust Limited

ABN

35 094 006 023

Quarter ended ("current quarter")

June 2020

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	624	3,509
1.2 Payments for		
(a) research and development	(136)	(701)
(b) product manufacturing and operating costs	(118)	(745)
(c) advertising and marketing	(17)	(146)
(d) leased assets		
(e) staff costs	(687)	(3,277)
(f) administration and corporate costs	(67)	(960)
1.3 Dividends received (see note 3)		
1.4 Interest received	5	23
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives	50	763
1.8 Other (provide details if material)	13	35
1.9 Net cash from / (used in) operating activities	(334)	(1,448)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) businesses		
(c) property, plant and equipment		
(d) investments		
(e) intellectual property		
(f) other non-current assets		

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment		
	(d) investments		
	(e) intellectual property		
	(f) 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)		
2.6	Net cash from / (used in) investing activities		
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		2,532
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities		(144)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings	(23)	(153)
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	Net cash from / (used in) financing activities	(23)	2,236
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	3,234	2,090
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(334)	(1,448)
4.3	Net cash from / (used in) investing activities (item 2.6 above)		

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(23)	2,236
4.5	Effect of movement in exchange rates on cash held		
4.6	Cash and cash equivalents at end of period	2,877	2,877

5.	Reconciliation of cash and cash equivalents 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	865	709
5.2	Call deposits	2,012	2,525
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,877	3,234

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	161
6.2	Aggregate amount of payments to related parties and their associates included in item 2	

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

Director's Salaries & Superannuation

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	1,204	289
7.2 Credit standby arrangements		
7.3 Other (please specify)		
7.4 Total financing facilities	1,204	289
7.5 Unused financing facilities available at quarter end		
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(334)
8.2 Cash and cash equivalents at quarter end (item 4.6)	2,877
8.3 Unused finance facilities available at quarter end (item 7.5)	
8.4 Total available funding (item 8.2 + item 8.3)	2,543
8.5 Estimated quarters of funding available (item 8.4 divided by item 8.1)	7.6
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>	
8.6 If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer: N/A	
8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer: N/A	
8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer: N/A	
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

Compliance statement

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

28 July 2020

Date:

By the board

Authorised by:
 (Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow 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 cash flow 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.
3. 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.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.