Canine Cancer Trial Update

Highlights

- **One patient surpasses 240 days with stable disease and continued excellent Quality of Life (QoL), as attested by dog owner testimonials**
- **MPL extends survival three-fold, to a median of 150 days, while maintaining QoL**
- **MPL Phase 2 Trial expected to be completed by mid-2023**
- **PharmAust's commercial strategy aimed at bridging the options of standard-of-care with chemotherapy is on target**

7 March 2023 – Perth, Australia: PharmAust Limited (ASX: PAA & PAAO), a clinical-stage biotechnology company, is pleased to update on its Phase 2 trial for the treatment of canine B-cell Lymphoma with Monepantel (MPL).

Status of the current trial

Veterinary trial centres have been set up in Australia, New Zealand and the United States to evaluate the anti-cancer benefit of MPL in treatment naïve dogs newly diagnosed with B-cell lymphoma.

PharmAust is currently recruiting pet dogs with B-cell lymphoma to complete the Phase 2 evaluation of orally administered MPL. In addition to demonstrating effective anti-cancer activity, MPL has an attractive side-effect profile, with minimal adverse events.

Since the last Canine Trial Update (ASX announcement 10 February 2023), three new dogs have been recruited, and one dog (Bella) has completed the 28-day trial. Her veterinarian has determined Bella to be RECIST Stable Disease (SD).

Louie surpasses 240 days on MPL

B-cell Lymphoma in dogs has a poor prognosis. Unfortunately, without treatment, many types of lymphoma are fatal within a few weeks. In cases, the veterinarian may advise palliative care (steroid drugs) to reduce symptoms and possibly extend the survival time for a few weeks. However, even though chemotherapy can offer extended survival (typically around 12 months) it is only palliative and often results in an unacceptable adverse events profile and substantial costs. PharmAust's commercial strategy is to take the middle ground in the treatment of B-Cell Lymphoma which is achieved by inducing stable disease for 4-6 months with minimal side effects, so that the family and the dog can enjoy the limited time together.

In PharmAust's current Phase 2 study, a 12-year-old Beagle "Louie", has surpassed 240 days (8 months) as a result of being treated solely with MPL, and showing no side effects while his QoL of remains excellent. Louie was diagnosed with Progressive Disease (PD) at the end of his 28-day trial and, despite this poor prognosis, Louie has achieved > 240 days of good quality of life. Thus, it appears that dogs given MPL + prednisolone (or, in Louie's case, MPL on its own) after the 28-day trial period are living three times longer than expected with good quality of life and no chemotherapy-related side effects.

The life expectancy of dogs with B-Cell Lymphoma, treated with the standard of care (palliative steroid therapy) typically provides for 42-56 days of survival in association with progression. The combination of MPL with prednisolone has extended median survival to these pet dogs of 150 days (refer table below). More importantly, owner surveys from dogs in the trial indicate an excellent Quality of Life (QoL) score feedback

Off Study Retrospective Evaluation of MPL/Prednisolone post study treatments

DAY 28 – VCOG RECIST (PR/SD)

Dog Study #	# Days (Monepantel monotherapy)	#Days (Monepantel/Prednisolone therapy)	#Days (OST- Overall Survival Time)	Day 28 VCOG RECIST
002-002	28	149	**177**	**SD**
004-006	106	38	**144**	**SD**
004-005	42	35	**77**	**SD**
002-004	63	128	**191**	**SD**
005-005	71	111	**182**	**SD**
008-001	30	8	**38**	**SD**
002-005*	81	38	**>118**	**PR**

DAY 28 – VCOG RECIST (PD)

Dog Study #	# Days (Monepantel monotherapy)	#Days (Monepantel/Prednisolone therapy)	#Days (OST- Overall Survival Time)	Day 28 VCOG RECIST
005-002	43	107	**150**	**PD**
007-002	28	163	**191**	**PD**
005-006	32	125	**157**	**PD**
008-002	14	14	**28**	**PD**
008-003**	>242	NA	**>242**	**PD**
005-007	32	155	**187**	**PD**

*Initiated MPL/Prednisolone combination therapy
**On going treatment with MPL only therapy

Median OST (days)	**150.0**

Current study status

Thirty six dogs have been treated using MPL monotherapy so far (excluding the 5 dogs removed from the study). With continued positive outcomes, PharmAust is preparing for a successful Phase 2 completion and the commencement of a subsequent Phase 3 registration trial.

Two dogs have had a partial response as assessed by the administering veterinarians. **Partial response is a decrease in tumour size (sum of longest diameter as defined by RECIST criteria) of >30%, no new lesions.**

Nine dogs have had a stable response as assessed by administering veterinarians. **Stable response is a decrease in tumour size (sum of longest diameter as defined by RECIST criteria) of < 30% or an increase in tumour size of < 20%.**

Side effects were minimal or not detected. In comparison, the most common side effects of a dog being treated with chemotherapy include gastrointestinal effects (vomiting, diarrhea or loss of appetite) and decreases in blood cell counts. Also, during chemotherapy, owners need to take precautions when handling their pets and their waste. Drugs may be excreted in the urine and faeces, so pregnant women and children should not be assigned the duty to clean up urine and faeces for the duration of therapy.

PharmAust requires greater than or equal to 18 dogs with an overall clinical benefit out of 46 dogs to meet its statistical endpoint. i.e. requires 8 of a further 20 dogs (not including Bella whose veterinarian has determined her to be RECIST Stable Disease).

The table below outlines the status of all dogs in the study. Please note the explanation of the definitions used in the table.

Pet dog Phase 2 trial: Treatment Naïve B Cell Lymphoma require 8 of a further 20 dogs with SD at D 28 to meet Bayesian outcomes for a successful Phase 2 trial.

Study Metric	#Dogs	#Dogs SD (Stable Disease)		#Dogs PD (Progressive Disease)	#Dogs (Plasma Analysis)	#Dogs (On Study)
		#Dogs PR (Partial Response)	#Dogs SD (Stable Disease)			
Fully completed	26	2	8	16		
Partially completed*	5				5	
On study**	2					2
Total # dogs	33	10		16	5	2

*5 dogs partially completed and awaiting plasma analysis to confirm RECIST outcome
**2 dogs on trial (Queensland/WA enrolments)

RECIST DEFINITIONS
PR = > 30% tumour reduction
SD = <30 % tumour reduction and not >20% tumour increase

Dogs not included
4 dogs removed from the study due to lack of compliance with tablet administration instructions.
1 dog removed due to death on Day 4
5 dogs with plasma MPLS < target level (5 uM)

Plasma analysis

Sample collection from the sites has been very efficient. The lab has all samples apart from 2 from the US which are in transit. Plasma data from 7 dogs is on track for completion in April.

MPL is already approved for veterinary use for a different indication in food-chain animals. PharmAust is endeavouring to repurpose MPL as a safe and effective cancer treatment without the associated side effects of chemotherapy.

For further information on the study and to read the experiences of other enrolled pets and their parents visit https://www.pharmaust.com/veterinary-trial-testimonials/

The Board authorises this announcement.

Enquiries:

Anusha Aubert
Investor Relations
investorenquiries@pharmaust.com

P +61 (8) 9202 6814
F +61 (8) 9467 6111
W www.pharmaust.com

About PharmAust Limited:

PharmAust Limited is listed on the Australian Securities Exchange (PAA) and the Frankfurt Stock Exchange (ECQ). PAA is a clinical-stage company developing therapeutics for both humans and animals. The company specialises in repurposing marketed drugs lowering the risks and costs of development. These efforts are supported by PAA's subsidiary, Epichem, a highly successful contract medicinal chemistry company that generated $3.4 million in sales of goods & services in FY 2022.

PAA's lead drug candidate is monepantel (MPL), a novel, a potent and safe inhibitor of the mTOR pathway – a pathway having key influences in cancer growth and neurodegenerative diseases. MPL has been evaluated in Phase 1 clinical trials in humans and Phase 2 clinical trials in dogs. MPL treatment was well-tolerated in humans, demonstrating preliminary evidence of anticancer activity. MPL showed objective anticancer activity in dogs. PAA is uniquely positioned to commercialise MPL for treating human and veterinary cancers and neurodegenerative diseases as it advances a reformulated version of this drug through Phase 1 and 2 clinical trials.