28th November 2019 | CannPal Animal Therapeutics Limited ACN: 612 791 518 | ASX:CP1

CannPal to present at Pitt Street Research – Life Sciences Conference

Key Highlights

- CannPal is presenting at the 2019 Pitt Street Research Life Sciences Conference at the Baker McKenzie offices on November 28th 2019;
- Managing Director, Layton Mills, will be presenting on the Company's progress and two lead product candidates in development;
- Mr Mills's presentation is attached to this release.

26th June 2019: Animal health company **CannPal Animal Therapeutics Limited (ASX:CP1)** ("CannPal" or "the Company") is pleased to attach a presentation on the Company's progress that will be delivered by CannPal Managing Director, Mr Layton Mills, at the Pitt Street Research - Life Sciences Conference in Sydney, November 28th 2019.

The conference is being held by Pitt Street Research, and hosted at the Baker McKenzie Offices, at Tower One – International Towers Sydney.

The Conference is a unique opportunity to meet some of the leading ASX-listed Biotechnology Companies that focus on Agriculture and Veterinary Biotechnology.

About CannPal Animal Therapeutics

CannPal Animal Therapeutics Limited (ASX: CP1) is a pharmaceutical-focused animal health Company researching the benefits of medical cannabis for companion animals. CannPal is researching and developing medicines derived from cannabinoids to provide veterinarians with clinically validated and standardised therapeutics to treat animals in a safe and ethical way.

CannPal has identified a significant opportunity to benefit from the rapidly growing medical cannabis and health markets by developing innovate therapeutics derived from the cannabis plant. The Company is working closely with regulatory authorities and veterinary research organisations conducting clinical trials to commercialise therapeutic products that will meet regulatory approval and support the health and well-being of companion animals. To learn more please visit: www.cannpal.com

ENDS

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CannPal™
Animal Therapeutics

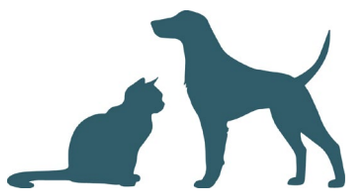
Pitt Street Research

Life Sciences conference

Sydney | November 2019

Key Investment Highlights

An ASX listed Animal Health Company, with a balanced product pipeline providing long term upside potential, supported by near term revenue catalysts



Clear Focus:

Global Animal Health Company focused on addressing the *significant and rapidly growing* companion animal market

Upside Potential:

A lead *pharmaceutical* product in Phase 2 clinical trials with a significant *global potential*. Fully funded for upcoming studies

Path to Revenue:

Supported by a lead nutraceutical product in development, to provide near term *revenue generating opportunities*

Experienced Team:

Highly credentialed team with *proven track record*, and extensive commercialisation experience in animal health

Senior Leadership

Entrepreneurial founder supported by an experienced Board and highly skilled management and R&D team – all invested in CannPals success

Geoff Starr

Non-Executive Chairman

- Over 32 years of executive experience, including 9 years leading MARS Global pet care
- Executive positions in Unilever and George Western Foods

Layton Mills

Founder / Managing Director

- FMCG entrepreneur with over 11 years in brand and product development
- Launched retail and consumer goods in the Australian market

✓ ***Board and management*** made up of leaders from the animal health industry, major pharma and large MNCs

Elanco · MARS petcare · Johnson & Johnson · Unilever

✓ ***Broader R&D team*** involved in regulatory approval for over 50 veterinary medicines

Comfortis (spinosad) · Alfaxan® · Trifexis (spinosad + milbemycin oxime)

Elanco Imrestor™ · Elanco Micotil® · Elanco Compudose® · Q-drench®

Corporate Overview

Tightly held stock with low burn rate, and fully funded to reach key catalysts

Share price performance

Trading information

Share price (as at 27-Nov-19)	**A$0.130**
52 week low / high	A$0.105 / A$0.195
Shares	93.1m
Market capitalisation	**A$12.1m**
Cash (as at 27-Nov-19)	A$2.5m
Incoming R&D rebate	A$650K
Ave quarterly burn rate (exc R&D)	**A$250k**

Key shareholders (Nov 2019)

Merchant Opportunities Fund – investment fund	19.88%
Gemelli – HNW investor	9.3%
Layton Mills – managing director	8.3%
Pepanne – HNW investor	8.2%
Tania Vidovic – ex. non-executive director	7.4%
Board and management[1] (excl. shareholders above)	1.2%

1. Excludes 2m unlisted options (500,000 to each of Geoff Starr, Robert Clifford, Robert Johnston and Kathryn Adams)

Global Animal Health Industry

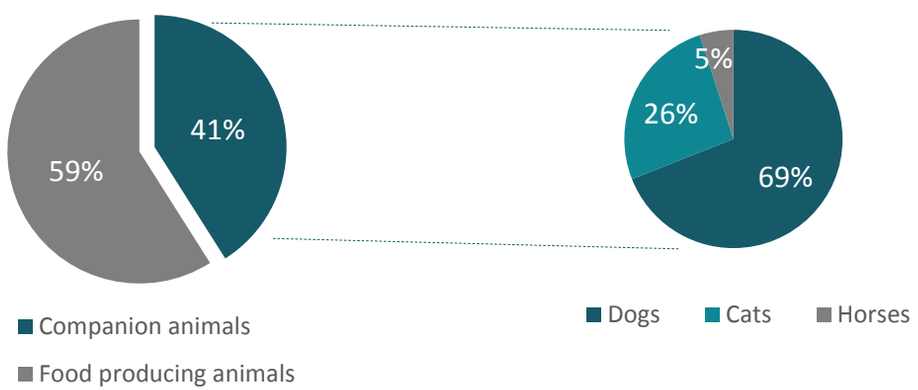
The total pet care market reached US$125b in 2018 as the rise in pet ownership and growing demand for premium products drive market growth

Global animal health industry

Estimated market size
(Pharmaceuticals/Feed additives)

US$34b

Market composition



*The companion animals market approximately **US$14bn**

Major geographical markets

			Market Share
	90m	94m	**34%**
	63m	72m	**33%**
*	58m	78.5m	**20%**

*** APAC- China, Hong Kong, Japan, India, Australia, New Zealand**

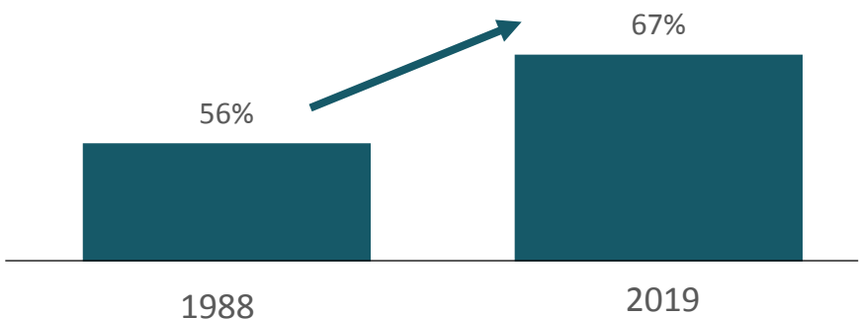
Source: Company filings; Staista; American Pet Products Association; IFAH Europe; Australian Veterinary Association, Vetnosis 2018 forecast

Key Drivers = Opportunity

Underpinned by favourable industry trends and key growth drivers

Increase in pet ownership levels

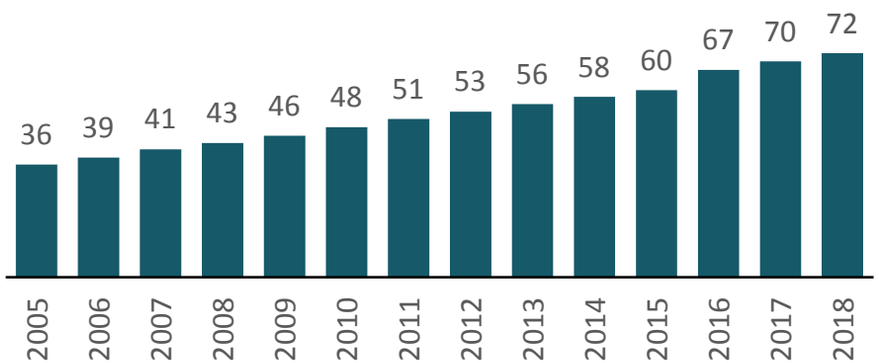
US household pet ownership (%)



Increase in US pet spending

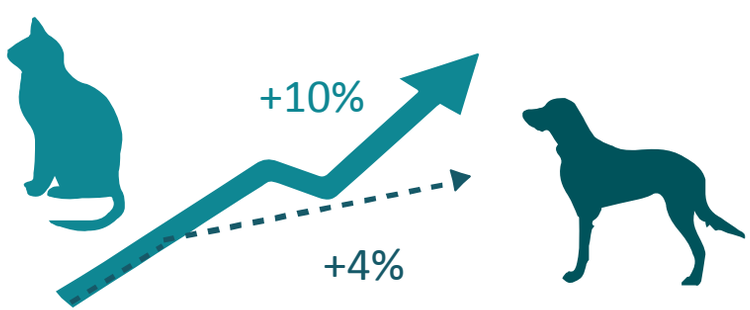
US Pet Industry Expenditure (US$bn)

CAGR: ~6%



Increased pet lifespan

Lifespan increase (2002-2012 data)



Growing use of Alternative Therapies

68% of pet parents are using alternative therapies, such as CBD oil, physical therapy and acupuncture, to cure their pets' medical or behavioral condition

Source: Statista; Pet Obesity Prevention; Vetnosis; American Pet Products Association; Packaged Facts, Michelson

Strategic Focus

Developing evidence-based plant derived pharmaceutical and nutraceutical products for companion animals, with a focus on hemp and cannabis

Pharmaceuticals
THC and CBD derived

- Drugs used to **TREAT** a disease
- Require regulatory approval
- Standardized drug product
- Often more expensive than nutraceuticals
- Not always suited to longer term use
- Longer time to market and higher development costs

✓ Long term upside potential and high ROI

Nutraceuticals
Hemp & CBD derived

- Products to assist in **PREVENTING** disease
- Do not always require regulatory approval
- Less onerous data pack required
- Safer for longer term use
- Shorter time to market, with less cost in the development
- Can leverage pharma research

✓ Complementary revenue generation

CPAT-01: Overview

Lead Pharmaceutical candidate CPAT-01, developed using active ingredients from the cannabis plant to target symptoms of osteoarthritis

- ✓ A standardized pharmaceutical product derived from **natural THC and CBD extracts**
- ✓ Synergistic effects of combining CBD with THC reduces the psycho-activity of THC and **enhances pharmacokinetics**
- ✓ Targeting pain and inflammation in dogs with **Osteoarthritis**
- ✓ **Favourable industry tailwinds** given the growing prevalence of obesity and arthritis in dogs
- ✓ Formulated as an **oral liquid solution** to allow for compliance and more standardised dosing
- ✓ Filed **two patents** on cannabinoid ratio and formulation
- ✓ **Successfully completed Phase 1**, confirming safety, bio-availability and early indications of physiological function

Estimated market size*	**US$1bn+**
Regulatory Focus	FDA/EMA/ACVM approval as a **prescription veterinary medicine**.
Current status	Commenced Phase 2A and Phase 2B pilot studies
Commercialisation strategy	Potential for **Licencing or co- development**

Lifecycle strategy
Expand into other therapeutic areas and delivery formats

Note: THC (tetrahydrocannabinol); CBD (cannabidiol)

CPAT-01: Progress

Consistent execution, with key milestones reached since October 2017 listing

Key Milestone	Status	Target timeframe
Phase 1A Pharmacokinetics (PK) - ***11 dogs***	✓ Complete	
Phase 1B Dose ranging, safety and PK - ***48 dogs***	✓ Complete	
Gene expression profiling	✓ Complete	
Chemokine/Cytokine/Hormone assays	✓ Complete	
In vitro /initial *in vivo* cannabinoid safety studies	✓ Complete	
Chemistry, Manufacturing and Controls (CMC)	✓ Commenced	• **Ongoing**
Phase 2A Pilot Dose Determination Study - ***60 dogs****	✓ Commenced	• **H1 2020**
Phase 2B Pilot Target Animal Safety (TAS) - ***16 dogs***	✓ Commenced	• **H1 2020**

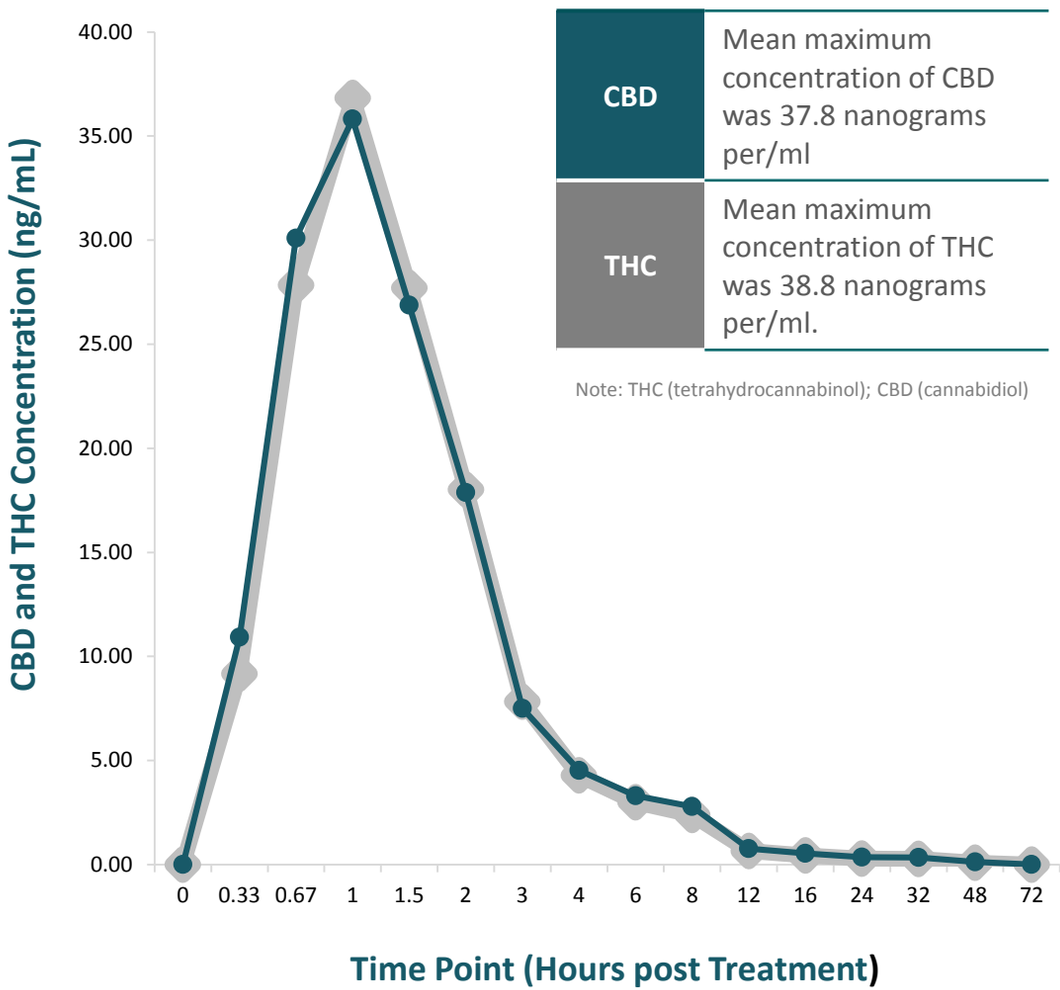
*over 40% of dogs have been recruited and commenced treatment

CPAT-01: Phase 1 Results

The initial target dose was found to be bioavailable with a wide safety margin, minimal psychotropic effects and no adverse events

Phase 1: Safe, Bioavailable and Palatable

- ✓ *Excellent safety profile* seen across various cannabinoid formulations
- ✓ CPAT-01 was *well absorbed* in its current proprietary formulation
- ✓ *No evidence of adverse effects* were observed at the target dosage given
- ✓ *No palatability issues* noted to date
- ✓ Early indications of a *stable formulation*
- ✓ Early indications of physiological function in *immune and inflammatory pathways*



CPAT-01: Phase 1 Results

Significant changes in gene pathways and biomarkers known to modulate anti-inflammatory processes were seen in treatment groups compared to placebo

Potential for different mechanisms of action

- ✓ Targeting endo-cannabinoid system through cannabinoid receptor modulation;
- ✓ Potential to influence the inflammatory cascade through chemokines and cytokines
- ✓ Potential for modulation of the immune response, through various processes
- ✓ Potential for adjunctive benefits through modulation of mood and sedation

Inflammatory/Immune genes and biomarkers were significantly influenced in Phase 1 research*

Upregulated **Chemokine ligand 5 (CCL5)**	✓ codes for a chemokine important in recruiting white blood cells to inflammatory sites - *Schall et al 1988. PACHER, et al 2006*
Downregulated **interleukin 8**	✓ codes for a chemokine important in recruiting white blood cells to inflammatory sites - *Schall et al 1988. PACHER, et al 2006*
Reduction of **GM-CSF**	✓ consistent with effects seen in humans treated with CBD and THC - *Pellati et al 2018*
Increased **Interleukin 15**	✓ consistent with an upregulation of IL-15 reported to modulate the immune response in humans – *Patidar et al. 2016*

Note: Significant (<p0.05) for gene expression and (<p0.1) for inflammatory biomarkers

CPAT-01: Market Positioning

Addressing a clear unmet need of providing new approved pain and inflammation treatments for companion animals with competitive advantages

- ✓ Cannabinoids may provide added benefit due to various modes of action for the symptoms of osteoarthritis
- ✓ Significant consumer demand, but lack of safe and available products for veterinary prescription
- ✓ There are limited osteoarthritis medications approved for companion animals, that are suitable for long term use
- ✓ NSAIDs which dominate the pet pain market are widely known for negative side effect profiles

Key comparisons	CPAT-01	Rymadil	Galliprant	Metacam
Potential for anti-Inflammatory and pain relief	✓	✓	✓	✓
Oral liquid solution	✓			✓
Suited to longer term use	✓			
Cannabinoid-derived	✓			
Estimated Annual Revenue	NA	US$130m	US$52m*	US$90m

*Only launched in 2017 .

Source: Various animal health Company presentations; Eli Lily and Company financial reports; Speaker and/or CannPal disclaims any duty to update.

CPAT-01: Upside Potential

Recent animal health transactions demonstrate significant value that can be realised by progressing the development of CannPals product portfolio

Acquiror (Licensee) / Target (Licensor)	Elanco / Aratana Therapeutics	Zoetis / Nexvet	Elanco / Jaguar Animal Health
Date	April 2016	April 2017	Jan 2017
Value	**US$85m** US$45m upfront, ongoing royalties, milestone and KPI payments	**US$85m** Represents an aggregate equity value - based on US$6.72 per share	**US$61m** US$1.5m upfront, ongoing royalties, KPI payments and development costs.
Deal type	License	Corporate	Licence
Commentary	• Galliprant is an FDA-approved therapeutic for control of pain and inflammation associated with canine osteoarthritis	• Nexvet is a biologic therapeutics company developing monoclonal antibody therapies for companion animals to treat chronic pain	• Jaguar developed canalevia for chemotherapy-induced diarrhoea from the *croton lechleri* tree

Sources: various Company press releases and publicly available information

CPAT-01: Summary

- ✓ CPAT-01 has demonstrated positive influence on pain and inflammation pathways in dogs
- ✓ It's an easily dosed and bioavailable formulation with a wide safety margin
- ✓ There is significant upside potential for CannPal via in the approval of CPAT-01 due to its likely high benefit-risk profile
- ✓ Fully funded to complete pilot Phase 2 program

Next Steps	Status	Target timeframe
Phase 2A Pilot Dose Determination Study* - ***60 dogs***	✓ Commenced	• **H1 2020**
Phase 2B Pilot Target Safety (TAS) - ***16 dogs***	✓ Commenced	• **H1 2020**
Confirm Contract Manufacturer for Scale up	✓ Commenced	• **Q1 2020**
Comprehensive pilot product stability program – Zone IVa	✓ Commenced	• **Ongoing**
Confirm plans for Pivotal program		• **After Phase 2**

**Phase 2A is an 8 week randomised, placebo controlled, double blind, pilot dose determination study in dogs with veterinarian diagnosed osteoarthritis. 12 veterinary clinics are participating with over 40% of dogs currently recruited*

Note: Significant (<p0.05) for gene expression and (<p0.1) for inflammatory biomarkers

DermaCann: Overview

Developing nutraceuticals derived from the less regulated hemp plant, as part of an early revenue generation strategy to support pharma R&D

- ✓ DermaCann is our **lead nutraceutical** in development for healthy skin function in dogs
- ✓ A patent pending **veterinary focused** hemp derived cannabidiol (CBD) formulation, with **no THC**
- ✓ **Complimentary product** to support treatment plans for dogs requiring healthy skin and immune function
- ✓ **Superior product quality** with cGMP manufacturing supported by a toxicology, safety, efficacy and stability data pack
- ✓ Seeking **regulatory approval** in Australia/New Zealand for veterinary prescription
- ✓ Exploring early commercialisation in other potential markets for **near term revenue opportunities**

Note: APVMA (Australian Pesticides and Veterinary Medicines Authority) cGMP (Current Good Manufacturing Processes) Source: internal research

DermaCann: Progress

A strategic development plan to commercialise a best-in-class nutraceutical, supported by safety, manufacturing and efficacy data

Milestones to date	Status	Target timeframe
Confirm cGMP manufacturer	✓ Complete	
Lab batch stability program	✓ Complete	
In-vitro/In-vivo cannabinoid safety studies	✓ Complete	
Target Animal Safety (TAS) study - ***20 dogs***	✓ Protocol stage	• **H1 2020**
User safety studies	✓ Commenced	• **H1 2020**
Field efficacy study - ***30 dogs****	✓ Commenced	• **H1 2020**
Manufacturing scale up/process validation	✓ Commenced	• **H1 2020**
APVMA/ACVM dossier preparation for submission	✓ Commenced	• **H1 2020**
Commercial evaluation in other markets (US)	✓ Commenced	• **Ongoing**

Note: APVMA (Australia Pesticides and Veterinary Medicines Authority) ACVM (Agricultural Compounds and Veterinary Medicines)
*Clinical trial material arrived at clinics, veterinarian training complete, dosing not yet commenced

DermaCann: Market Positioning

A veterinary focused, animal health nutraceutical which can be used as an adjunct therapy as part of a multi-modal treatment program

DermaCann
0.5% Oral Hemp Supplement

- ✓ A hemp-derived nutraceutical to promote healthy skin function in dogs
- ✓ Estimated total nutraceutical market size of over **US$690m** with 28% through vet clinics
- ✓ Adjunct therapies can complement pharmaceutical products as part of a safer multi-modal long term treatment plan
- ✓ ***Potential to capture pharmaceutical, nutraceutical and CBD market share***

apoquel (oclacitinib tablet)

- ✓ Market leading skin disease pharmaceutical for dogs for the control of pruritus associated with allergic dermatitis in dogs
- ✓ For moderate to severe disease
- ✓ Effective but with safety concerns
- ✓ Expensive
- ✓ **2018 annual sales of US$500m**

Source: Statista; various Company presentations and financial reports; Zoetis Press Releases

DermaCann: Summary

- ✓ DermaCann is a high quality hemp-derived animal health nutraceutical, that will be supported by an efficacy, safety and manufacturing data pack for commercialisation
- ✓ Seeking regulatory approval for DermaCann in Australia and New Zealand for veterinary prescription
- ✓ Exploring commercialisation opportunities in available markets such as the United States
- ✓ CannPal remains fully funded to complete the development of DermaCann

Next Steps	Status	Target timeframe
Target Animal Safety (TAS) study - ***20 dogs***	✓ Drafting protocol	• **H1 2020**
Field efficacy study* - ***30 dogs***	✓ Commenced	• **H1 2020**
Stability and GMP manufacturing validation	✓ Commenced	• **Ongoing**
APVMA/ACVM Dossier Submission	✓ Commenced	• **H1 2020**
Explore early commercialisation opportunities in available markets		• **Ongoing**

**The field efficacy study is an 8 week randomised, placebo controlled, double blind study in dogs with atopic dermatitis. 2 dermatology clinics are participating across Sydney and Brisbane. First dosing expected Q4 2019*

Ongoing R&D

CannPal entered into a research project with CSIRO in June 2018 to evaluate drug delivery technologies for use with hemp and cannabis compounds

- Researching innovative microencapsulation technology for protection and delivery of bio-actives in functional foods
- Identified technology compatible with CannPal formulations
- Potential for life cycle strategy of current pipeline
- Completed 4 research projects with technology since June 2018
- Produced nutraceutical pilot batch with leading Australian pet food manufacturer, leveraging the technology
- May provide additional commercialisation opportunities in the pet dietary supplements sector

✓ Commencing market-test with a new end-product application in a small-scale commercial trial with a select consumer group in H1 2020.

Commercialisation Strategy

CannPal has a comprehensive strategy in place to optimise shareholder value and is transitioning into the commercialisation phase of the business

Establishment	Establish unmet needs in animal health, where current treatments are inferior (due to cost or side effects)	✓
Identification	Identify drug candidate(s) – with a focus on cannabinoids that have shown efficacy and safety tolerances in human models	✓
Development	Develop candidate(s) into novel therapeutics with innovative and bio-available delivery systems with proprietary IP	✓
Validation	Validate candidate(s) through well-controlled clinical studies to support the safety, quality and efficacy of the products	*In progress*
Commercialisation	Align with strategic partners for out-licencing, distribution or co-development opportunities for commercialisation	*In progress*

Appendix

Board of Directors

Layton Mills *Founder/ Managing Director*

- Experienced FMCG entrepreneur with over 11 years spent in brand and product development, particularly in mainstream grocery channels;
- International Business Experience
- Launched a number of consumer goods brands in the Australian Market.

Geoff Starr *Non-Executive Chairman*

- 32 years' experience building and transforming businesses in household, food, chemical, agribusiness and pet care: 9 years in senior executive roles at MARS Global Pet care; 13 years in Asia, 10 years global experience, including USA and Europe;
- Executive positions including, Unilever, George Western Foods.

Max Johnstone *Non-Executive Director*

- 11 years as President, Chief Executive Officer and Executive Director of Johnson & Johnson Pacific;
- Extensive overseas experience in leading businesses in both Western and Central-Eastern Europe, Africa as well as Asia-Pacific;
- Board positions on a number of highly regarded ASX listed Companies.

Dr Kate Adams *Non-Executive Director*

- Co-owner of Bondi Veterinary Hospital and Founder of tech startup, Thankly;
- Held senior leadership roles for the Federal Attorney-General's Portfolio including as Analyst, Principal Adviser and Chief of Staff for a number of Royal Commissions;
- Bachelor of Science, Masters of Data Analytics, Bachelor of Veterinary Medicine and Surgery.

Robert Clifford *Non-Executive Director*

- Over 20 years of experience in Brand implementation and Business Strategy and Planning
- Senior leadership roles in large multinational private and public corporations in Australia, China and Ireland
- Former President of the Irish Australian Chamber of Commerce

Research and Development

Dr Margaret Curtis *Head of R&D*

- Qualified veterinarian with 17 years' of director experience with market leading animal health company, Elanco;
- Contributed to the development of animal health products for Elanco globally;
- Has gained approval for over 20 drugs in over 100 countries;
- Lead global teams across Australia, USA, Europe, Asia and Latin America.

Dr Jeffrey Sherman: *Lead Toxicology*

- Board certified senior Toxicologist with in depth knowledge of VICH GLP and GCP
- Diplomat of the American Board of Toxicology with extensive experience in risk assessment, FDA regulations and veterinary medicines
- Local, state, federal and international jurisdiction legislative experience

Kevin Willard: *Senior Formulations Chemist*

- Expertise in formulation development, processing (clinical trial manufacture and technical transfer) and GMP Quality;
- Specialised in CMC (Chemistry, Manufacturing and Controls) technical writing;
- 34 years of experience working with market leading Elanco Animal Health and Eli Lilly

Dr Ted Whittem: *Commercial Veterinary Adviser*

- Former Head of School at the Melbourne Veterinary School;
- Former Chairman of the Examination Committee of the American College of Veterinary Clinical Pharmacology;
- 7 years as the head of R&D with Jurox Animal Health, brining over 30 products to market.

Dr Rayson Tan: *Chief Scientific Adviser*

- Experienced veterinary consultant with a PhD in veterinary oncology, BVSc in veterinary medicine and surgery and BSc in veterinary research;
- Currently serves as the regulatory and ethics executive for the Garvan Institute of Medical Research and is exceptionally proficient in biomedical and veterinary science.

Disclaimer

The material in this presentation has been prepared by CannPal Pty Ltd ACN 612 791 518 (CannPal) and is general background information about CannPal's activities current as at the date of this presentation. This information is given in summary form and does not purport to be complete.

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Thank You

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