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PharmAust
LIMITED

ASX: PAA

Investor Presentation

ACN 094 006 023

AGM 2016

November 2016

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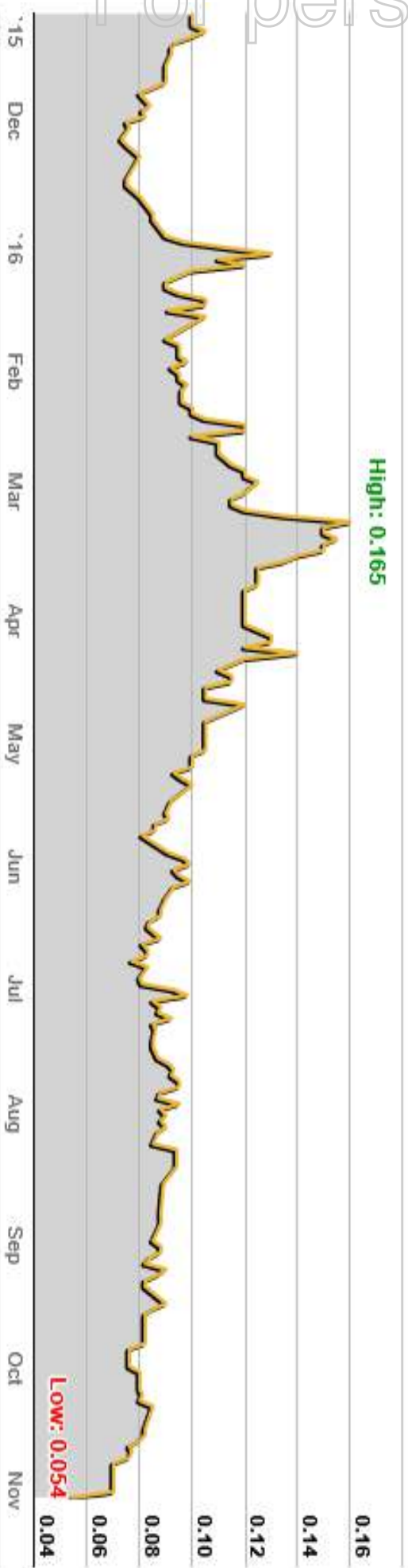
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Financial Snapshot

PharmAust Limited

ASX Code	PAA
Shares on Issue	92.5 million
Market Cap. (at 7c per share)	\$6.5 million
Cash (30 Sep 2016)	\$423k
R&D Tax Incentive Application	\$406k
Debt	\$562k
Epichem Annual Sales (est)	\$2.4 million

1. Ex Price \$0.16, Expiry Date 3 September 2018



Shareholders

Professor David Morris	7.2%
Dr Roger Aston	5.7%
Top 20	48.9%

Board & Management

Dr Roger Aston	Executive Chairman
Mr Robert C Bishop	Executive Director
Dr Wayne Best	Non Executive Director
Mr Sam Wright	Non Executive Director

Business Overview

Proprietary Technology	<ul style="list-style-type: none">• MPL Approved for Vet (Novartis Animal Health)• Patents for use in cancer PharmAust
Option with Novartis Animal Health	<ul style="list-style-type: none">• Efficacy in Canine Cancer -> Option Exercise
Epichem Contract Sales	<ul style="list-style-type: none">• 2016 - \$2.4M• 2017 - \$3.0M
Phase II Canine	<ul style="list-style-type: none">• Cambridge, Sydney & Brisbane
NASDAQ	<ul style="list-style-type: none">• Underwriting Agreement Joseph Gunnar & Co LLC• Funding for Phase II MAN

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Key Drivers for 2017

Phase II Outcome (Canine)

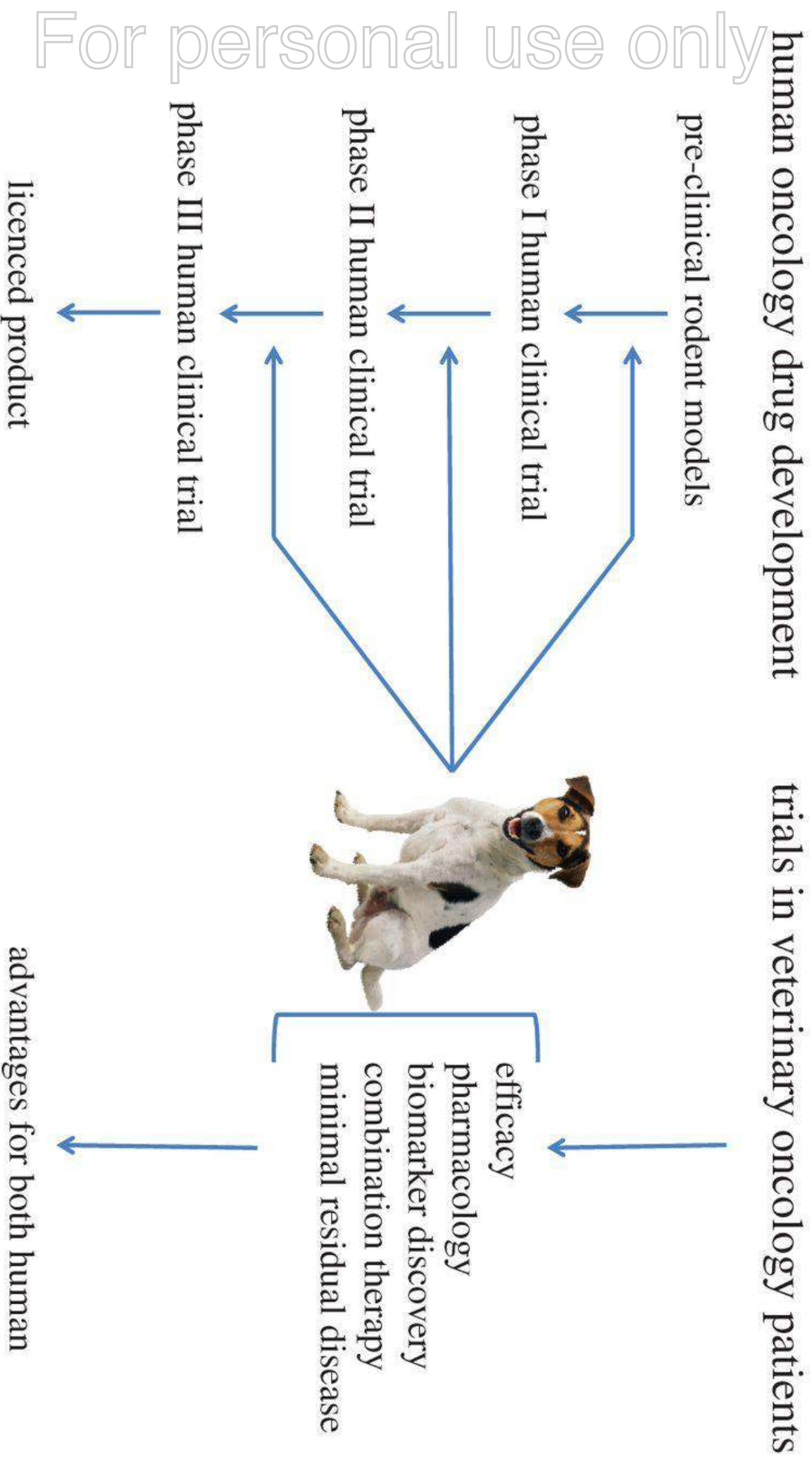
Option Exercise by Novartis-Elanco

NASDAQ Listing and Capital Raise

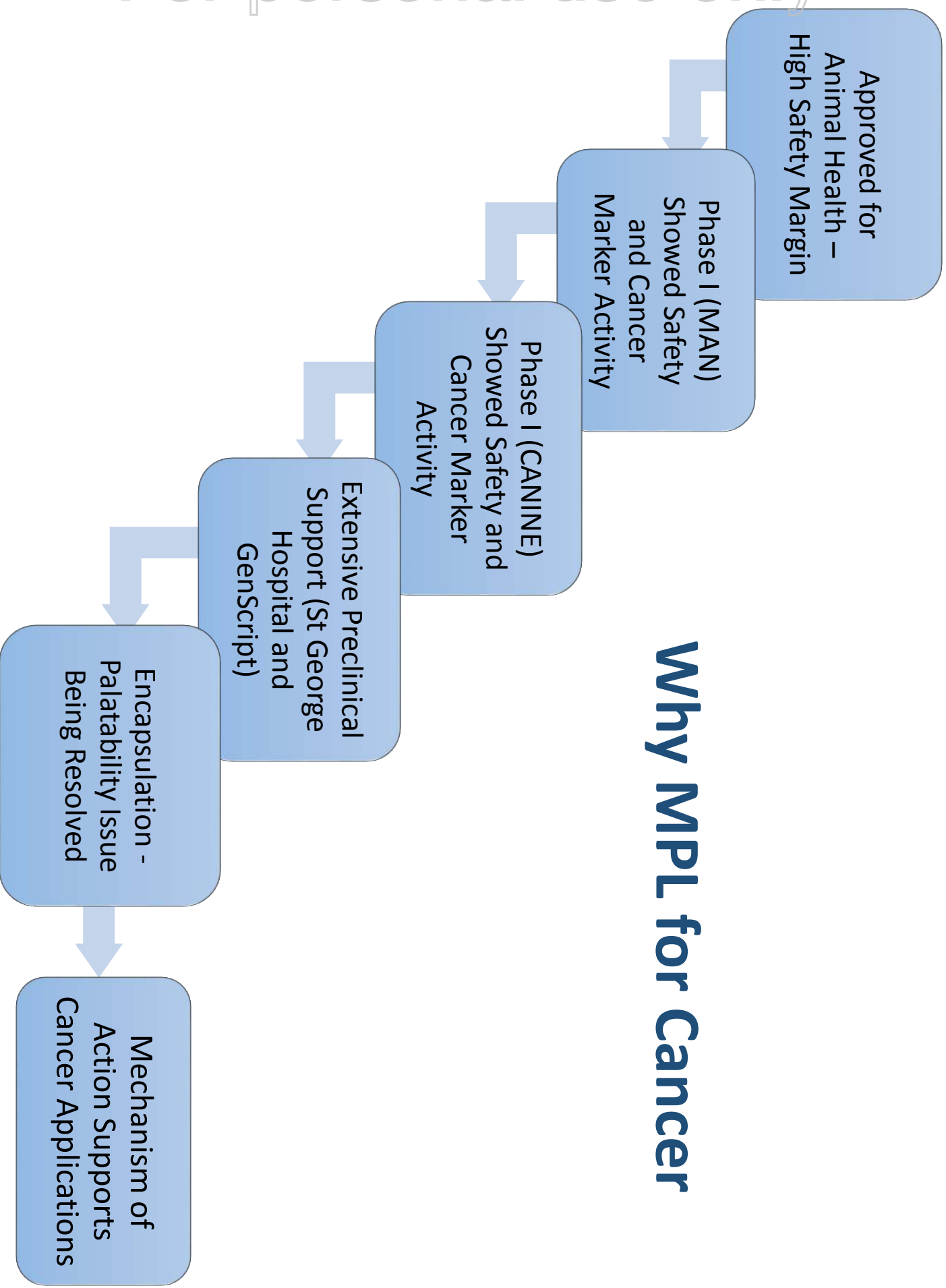
Initiation Phase II (MAN)

Growth of Epichem Business

Performance of MPL in Canines (Phase II (CANINES) Underpins Outcomes in PHASE II (MAN)



Why MPL for Cancer

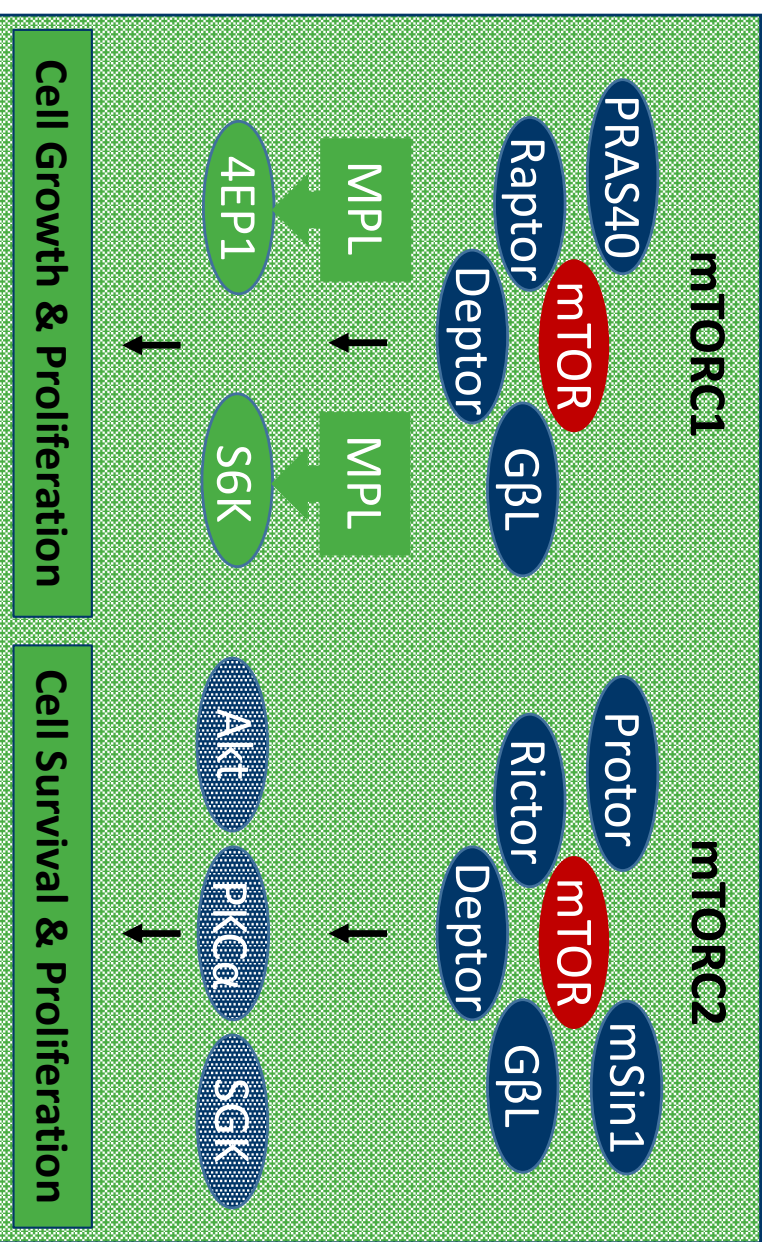


High s6k Correlates with Multiple Negative Outcomes

High s6k (p70s6k) in patients correlates with:

- ❖ Resistance to therapy
- ❖ Aggressive disease
- ❖ Poor prognosis
- ❖ High metastasis

Two complexes of mTOR
(mammalian target of rapamycin)



mTOR pathway depiction by:

Marc Dufour, Anne Dormond-Meuwly, Nicolas Demartines and Olivier Dormond
Cancers **2011**, 3, 2478-2500; doi:10.3390/cancers3022478

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Elevated p-RPS6KB1(p70s6k) is Associated with Poor Outcomes in Cancer

High p-RPS6KB1 in patients with colorectal, lung, ovarian, pancreatic and hepatic cancers correlates with:

- Resistance to therapy
- Aggressive disease
- Poor prognosis
- High metastasis

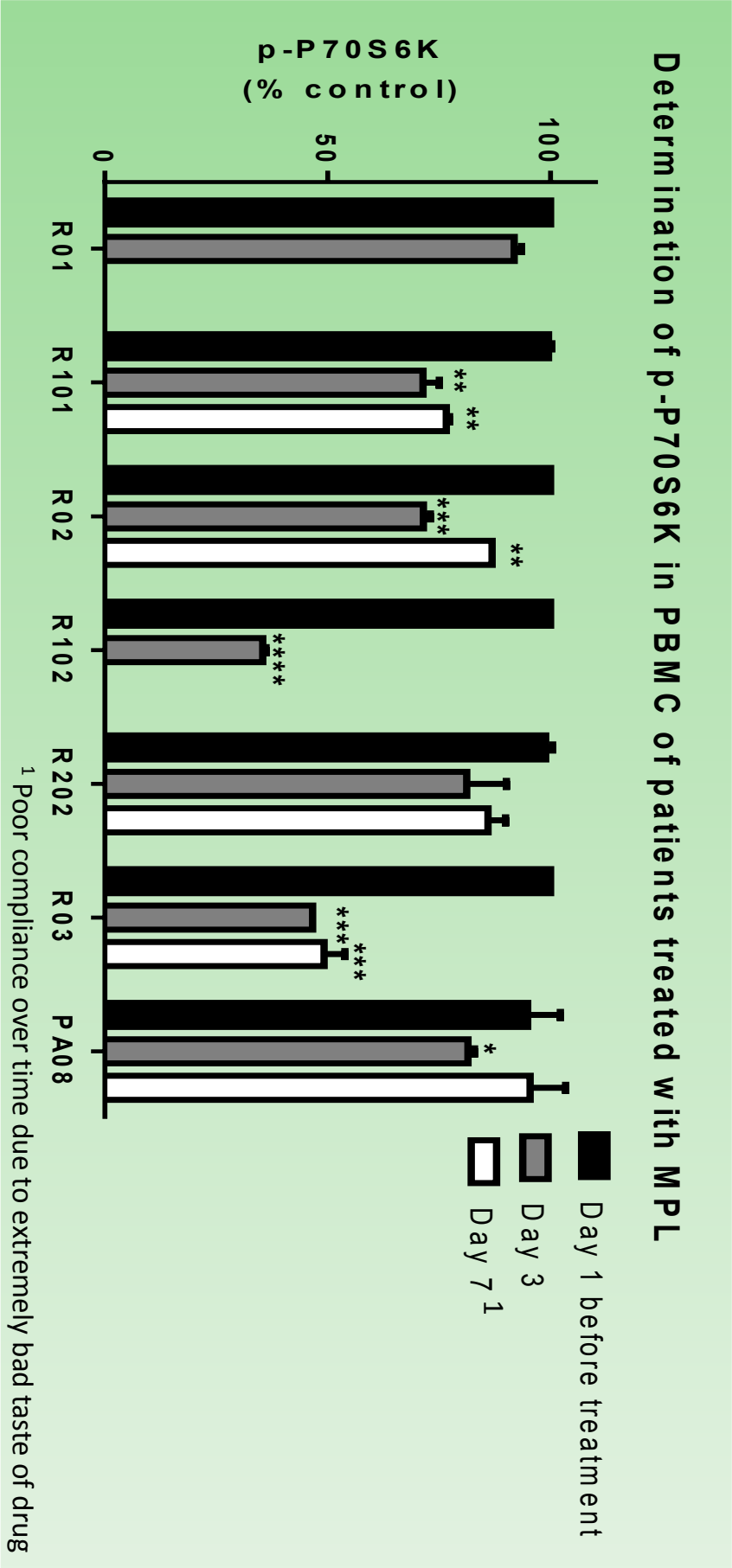
1) Rapamune (Rapamycin) – sirolimus (Pfizer): kidney rejection – tested in cancers:

2015 sales = US \$200 million

2) Afinitor - everolimus (Novartis): European Medicines Agency for renal cell carcinoma: **2015 annual sales = US \$300 million**

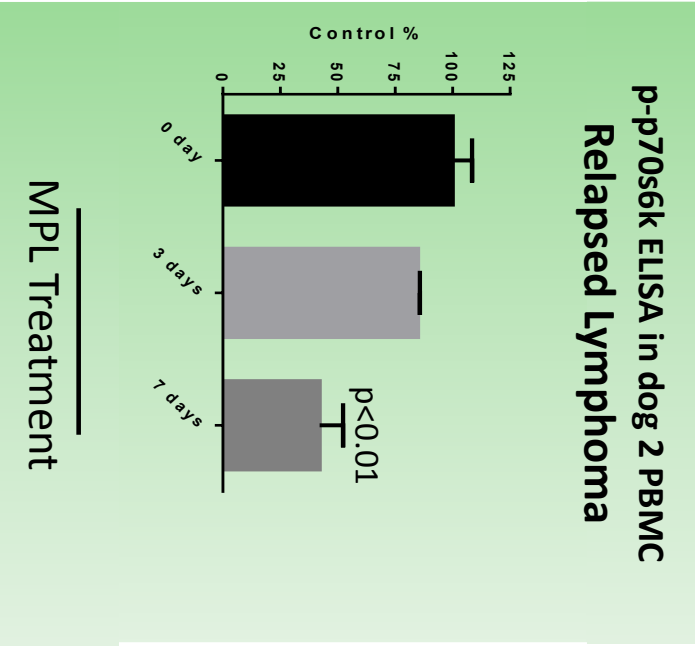
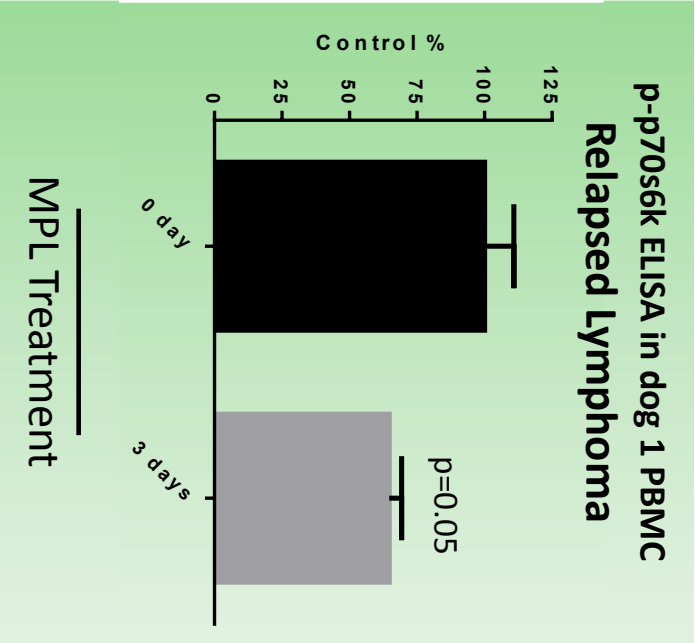
3) Torisel - temsirolimus (Pfizer): EMA approval for renal cell carcinoma
2015 annual sales = US \$300 million

Suppression of p70s6k by MPL in Humans



COMPARISON	SIGNIFICANT	p-VALUE
Day 1 vs. Day 3	Yes	***
Day 1 vs. Day 7	Yes	**

Suppression of p70s6k and tumour size and increased Quality of Life by MPL in Canines



8 dogs (Lymphoma, Melanoma, Adenocarcinoma, Osteosarcoma) – increased QOL but poor taste

COMPASSIONATE USE CHEMOTHERAPY COMBINATION							
Dog	Tumour Type	Capsule	Dose (mg/kg bw)	Combination Therapy	Duration (days)	Outcome	Safety Events
Dog 1	Oral malignant melanoma nodal metastasis	Yes	3.5	Carboplatin, 250 mg/m2	28	PD	None
Dog 2	Appendicular OSA pumunary metastases	Yes	4.8	Carboplatin, 250 mg/m2	23	PD - anecdotal improved QOL	None

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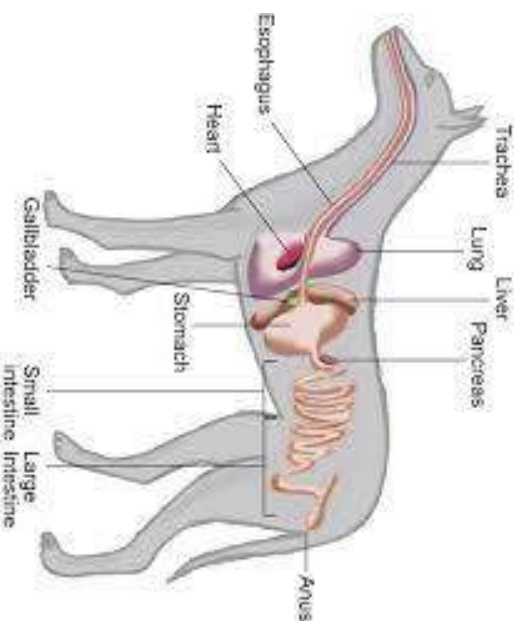
Canine Cancer Trial

Department of Veterinary Medicine,
University of Cambridge, UK



Aims:

- Extend on Phase I canine cancer trial undertaken in Sydney which showed suppression of cancer marker p-Rps6kb1
- Demonstrate tumour regression or progression free survival
- Outcome trigger for Co-development with partner



UNIVERSITY OF
CAMBRIDGE

Effects of MPL in Canine Mammary Cancer

Pretreatment 1.9.16



4 Weeks 29.9.16



8 Weeks 27.10.16



Progressive Disease

Progressive Disease

Stable disease

Major palatability drawback of MPL in human and Canine Trials being Resolved by Encapsulation

Compliance for more than 3 days of treatment in both man and canines was challenging in Phase I due to the remarkably foul taste of the MPL (Zovix) liquid formulation manufactured by Novartis.



GMIP
Reformulation of MPL into capsules ready
for Phase II

In Summary

MPL Achieved Key Preclinical and Clinical Endpoints

1. **Safety** – Excellent safety profile as predicted from pre-clinical models
2. **Active dose** – Identified dosage of MPL from effects on cancer markers in man
3. **Efficacy** – Determined efficacy by markers and effects on tumours (p70s6K and p4E-BP-1)
4. **Synergy** – Demonstrated synergy in mouse model systems with many cytotoxic drugs currently in use

Potential for MPL Performance in Phase II (MAN)

- Success in Phase II Canine Trials will Underpin Expectations in Phase II (MAN)
- Reformulation of MPL into Dry Powder in Capsule for Trial in MAN
- Exploratory Phase II Canine Trial will provide guidance on:
 - Types of Cancer ideally suited to MPL Therapy
 - Whether to use with Chemotherapy
 - Stage of Progression for Treatment

In Summary

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- Novartis Animal Health registered Zolvix (MPL) for the treatment of parasitic diseases in animals
- Extensive manufacturing and toxicology already established by global major pharma company
- Over 50 MPL analogues are available for development and jointly owned with Nihon Nohyaku
- PharmAust holds patents on the use of MPL and other amino-acetonitriles (AADs) in cancer
- Epicchem has synthesized further novel compound of MPL for PharmAust
- Underwritten US Listing and Fund-Raise in 2017 to support Phase II (MAN)

Experienced Management

Dr. Roger Aston, Executive Chairman

Dr Aston is both a scientist and seasoned biotechnology entrepreneur, with a successful track record in both fields. Previously at Wellcome Research Laboratories, Peptech, Cambridge Antibody Technology, QinetiQ, psivida, Clinuvel, HalcyGen and Ascent Pharma Health. More recently CEO of Mayne Pharma Group.

Robert Bishop, Executive Director

30 years experience in corporate finance and equity capital markets both as a lawyer and an investment banker.

Dr. Wayne Best, Director

30 years experience in synthetic and medicinal chemistry both in academia, government and industry. He is also the Managing Director of PharmAust's subsidiary Epichem Pty Ltd.

Sam Wright, Director & Company Secretary

20 years experience in the pharmaceutical, biotech and healthcare industry. Extensive experience in the administration of ASX listed companies, corporate governance and corporate finance.

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