

Shareholder Presentation

March 2015

ASX: PAA

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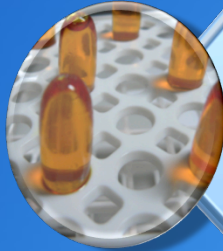
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PHARMAUST LIMITED

...Fast tracking leading
edge technology in cancer
therapy....



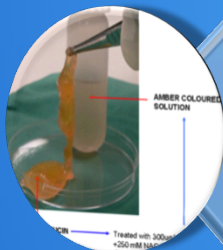
PharmAust Cancer Programs



MPL Breakthrough New Cancer Therapy Drug Class with Reduced Side-Effects



Albendazole Reformulation and use of an Approved Drug for Cancer



Mucin Dissolution Sensitizing Highly Resistant Cancers to Chemotherapy

PHARMAUST LIMITED CORPORATE STRUCTURE

PHARMAUST LIMITED
ASX:PAA

100%

100%



Sydney-Based



Perth-Based

PharmAust -> Challenging Limitations in Cancer Therapy

- Drug Toxicity
- Drug Resistance
- Cancer Recurrence
- Poor Tumour Targeting
- Poor Diagnosis -> Patients Progressed at Treatment
- Optimising Treatment
- Survival vs Quality of Life



PHARMAUST STRATEGY



1. A Cancer focused Company
2. Capitalising on over 10 years of research and development at the St George Hospital, Sydney
3. Capitalising on substantive investments by Major Pharmaceutical Corporations
4. Focusing on new uses of existing approved drugs
5. Creating a commercial position through Strategic Patenting and Partnerships

PHARMAUST STRATEGY

Oncology Focus

Leading New Drug
for Cancer
Management

Phase II Clinical
Stage

Strategic
Partnerships with
two Global
Corporations

- Targeting oncology applications of well established drugs and “piggy-backing” on substantive programmes of major pharmaceutical companies
- Identifying highly specific clinical needs in oncology
- Engaging a leading clinical oncology units (St George Hospital, Sydney) and The Royal Adelaide Hospital
- Granted patents or patent filings (either owned outright or jointly with partner)
- Relationships with major global corporations
- Use of CROs and external R&D suppliers

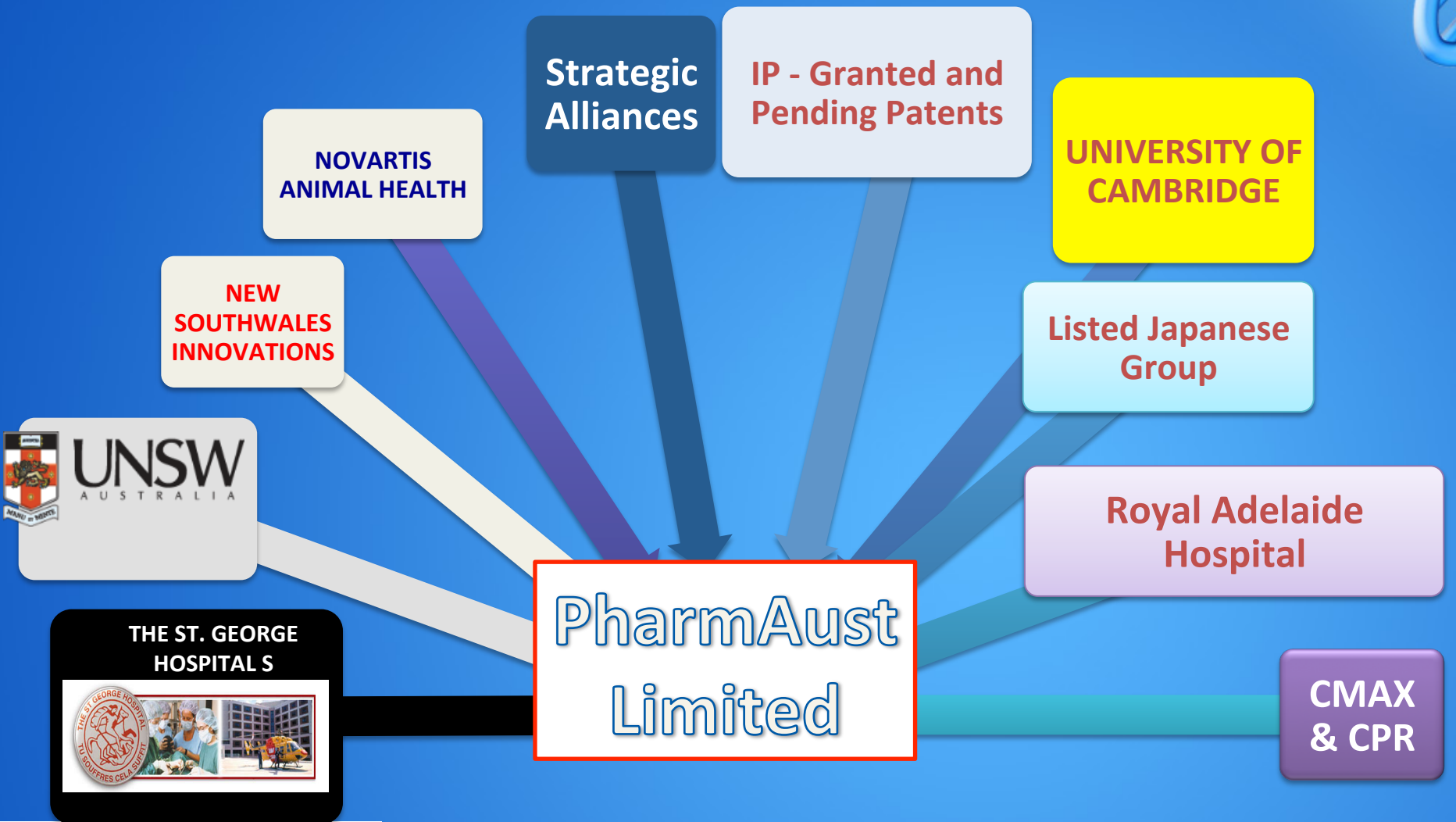
Targeted Therapies for Cancer



Recent Examples of New Targeted Therapies

DRUG	TARGET	PEAK ANNUAL SALES	PATIENT COST	COMPANY
HERCEPTIN + PACLITAXEL	BREAST CANCER (HER2-NEU)	\$6.5Bln	\$60,000/ANNUM	GENENTECH/ ROCHE
GLEEVEC	MULTIPLE CANCERS TYROSINE KINASE	\$4.7Bln	\$92,000/ANNUM	NOVARTIS
AVASTIN + 5FU	COLON, RENAL, OVARIAN CANCER VEGF INHIBITOR	\$2.6Bln	\$100,000 /ANNUM (US)	GENENTECH
ABRAXANE + GEMCITABINE	PANCREATIC CANCER	\$800M	\$60,000/ANNUM	CELGENE

Pharmaust Limited Foundations, Relationships and Commercial Cornerstones





St George Hospital Department of Surgery/Oncology

MONEPANTEL (MPL)

1. MPL is a new class of anticancer drug
2. MPL can act alone or in combination with standard of care chemotherapy for treatment of cancer
3. Pharmaust has the IP for MPL assigned from the University of NSW

MONEPANTEL'S UNIQUE PROPERTIES

- ❖ Unlike most cancer drugs, MPL has virtually no toxicity based on the toxicology undertaken by Novartis Animal Health. MPL is currently sold as a treatment for sheep helminthic parasitic infections (Zolvix). Such treated animals enter the food chain.
- ❖ MPL has shown a high degree of selectivity in killing cancer cells over normal cells in culture
- ❖ Studies in animal models show potent tumour regression without toxicity as measured by weight loss
- ❖ MPL demonstrates a potent synergistic action with many cytotoxic drugs used in “Standard of Care”
- ❖ Global investigation of “SYNERGY” between mTOR inhibitors and chemotherapy are underway

Monepantel Kills Drug-Resistant Cancer Cells

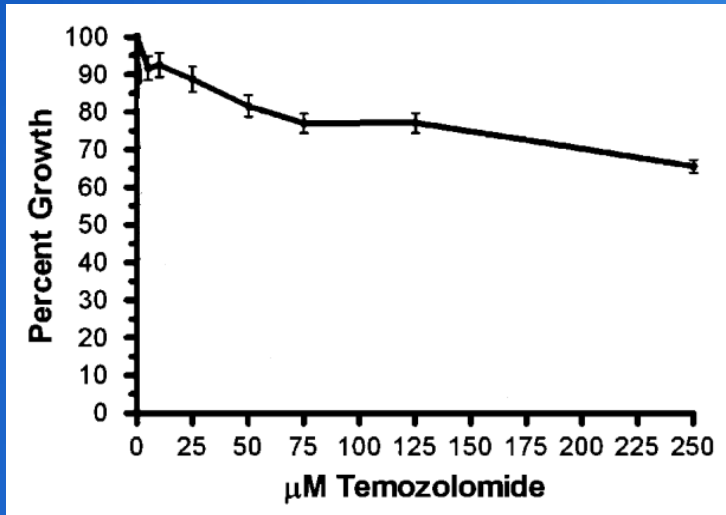


- Temozolamide resistant cancer cells are effectively killed by MPL
- MPL has little toxicity on “Normal” Human Embryonic Kidney Cells
- MPL offers Treatment Options either singularly or with “Standard of Care”

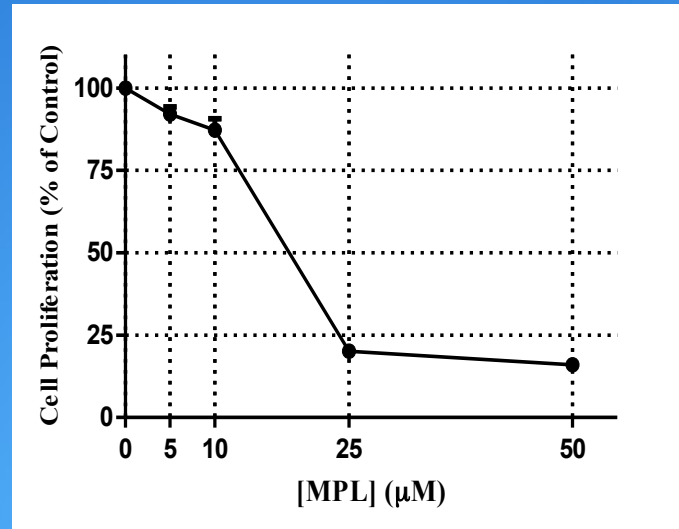
EFFECT OF MPL ON CANCER CELLS



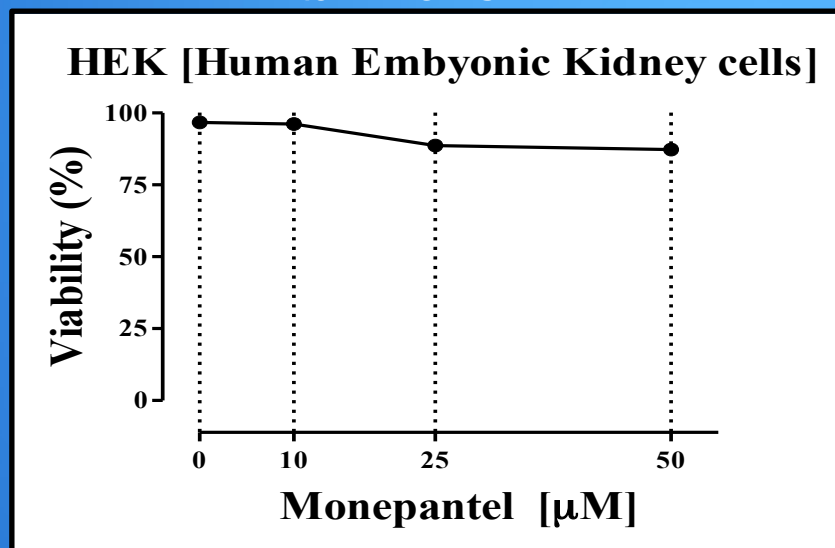
TEMOZOLAMIDE RESISTANT GLIOMA U251



TEMOZOLAMIDE RESISTANT GLIOMA U251



NORMAL CELLS



EFFECT OF MPL ON TUMOUR-BEARING MICE

Dose-finding study of IP administered Drug in nude mice bearing
Subcutaneous ovarian tumors (OVCAR-3), SC / IP



Control Group
VEHICLE



Low dose Group
MPL (25 mg/kg)
DRUG



High dose group
MPL (50 mg/kg)
DRUG

SYNERGY BETWEEN AMINOACETONITRILES AND CYTOTOXIC DRUGS

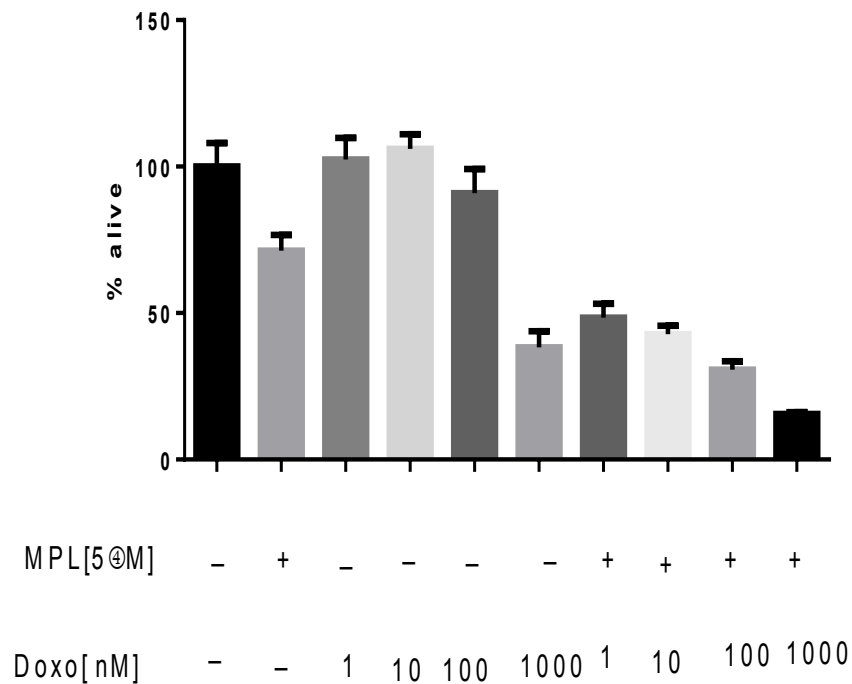


- Selective Synergy between MPL and cytotoxic drugs on “cancer” cells
- Little synergy between MPL and cytotoxic drugs on “normal” cells
- Opportunity for “New Class” of drug for cancer
- Therapy in conjunction with standard clinical practice
- Optimization of Synergy

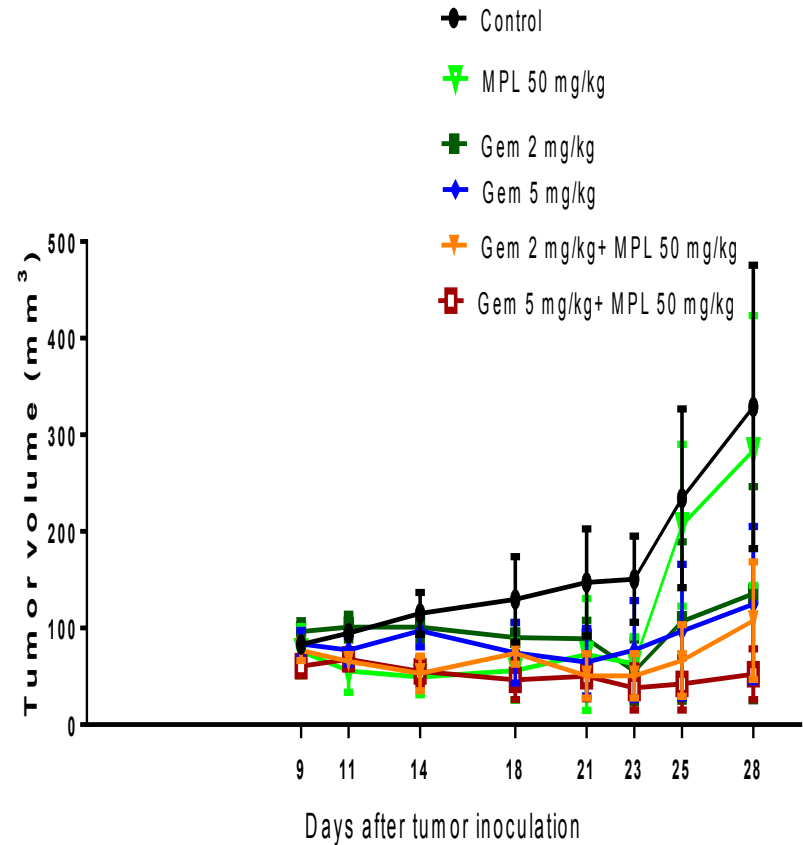
Enhancement of Doxorubicin and Gemcitabine

A2780 cells, 72 h treatment with MPL& Doxorubicin

SRB assay



Synergy between Doxorubicin and MPL



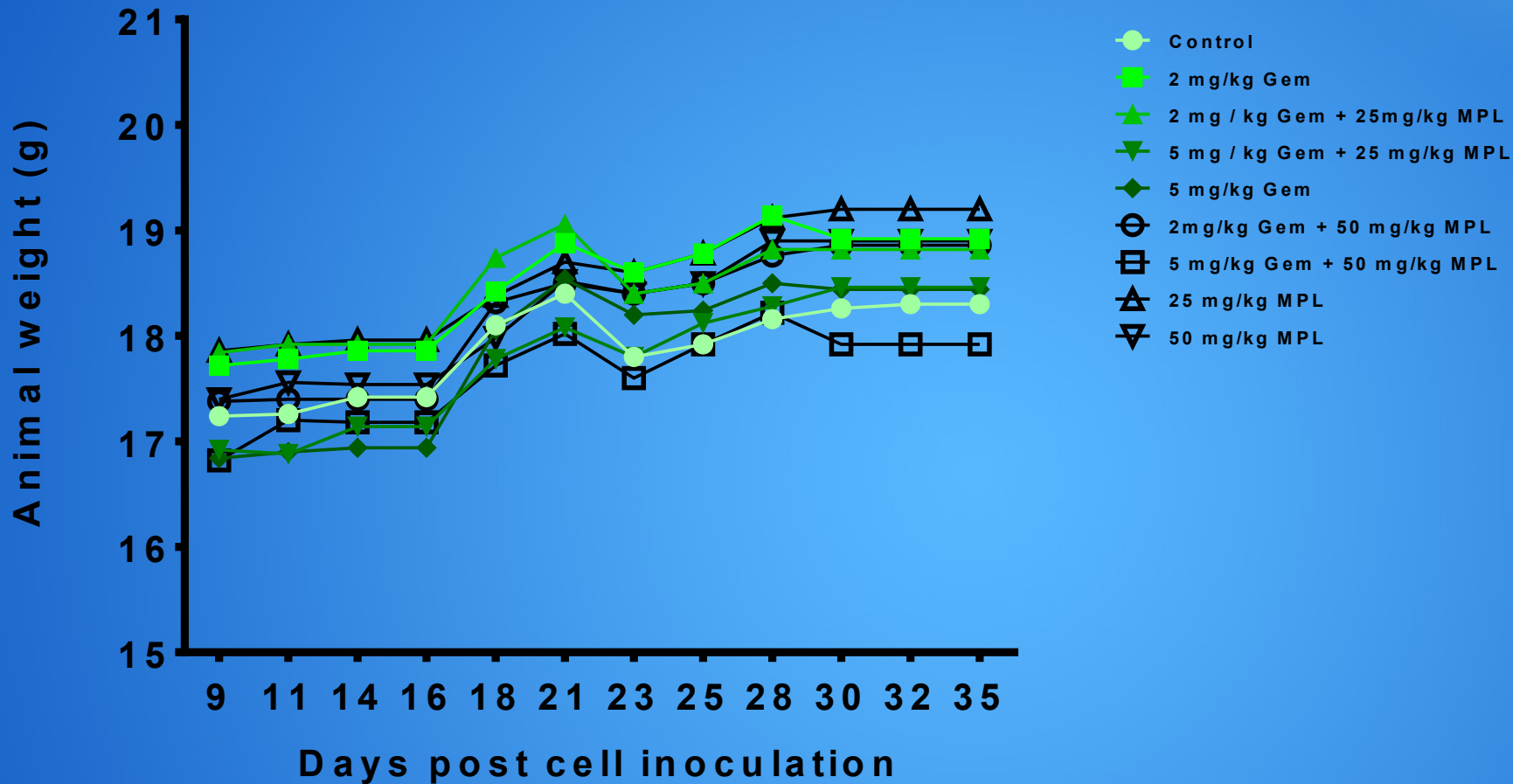
Comparison of tumour volume V.s. treatment time in mice treated with MPL 50 mg/kg alone or in combination with Gemcitabine 2/5 mg/kg (Week 3 of treatment).

OVCAR 3 S.C tumour; i.p. injection

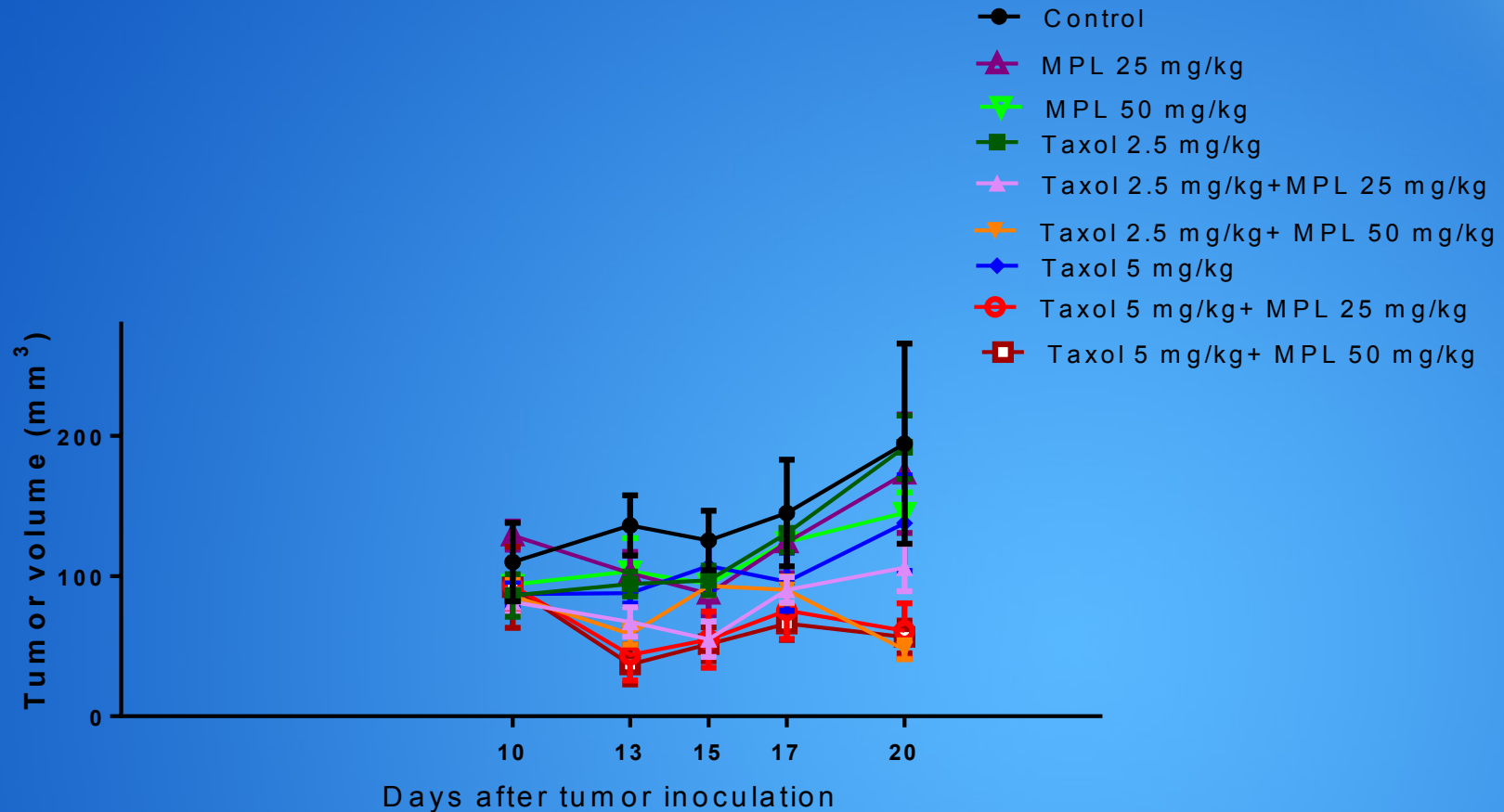
Lack of PPL-1 Toxicity as Measured by Weight Loss



Body Weight



Synergy with Taxol



Comparison of tumour volume V.s. treatment time in mice treated with MPL/ Taxol alone or in combination (after 5 doses).

Human Safety Trial - Monepantel

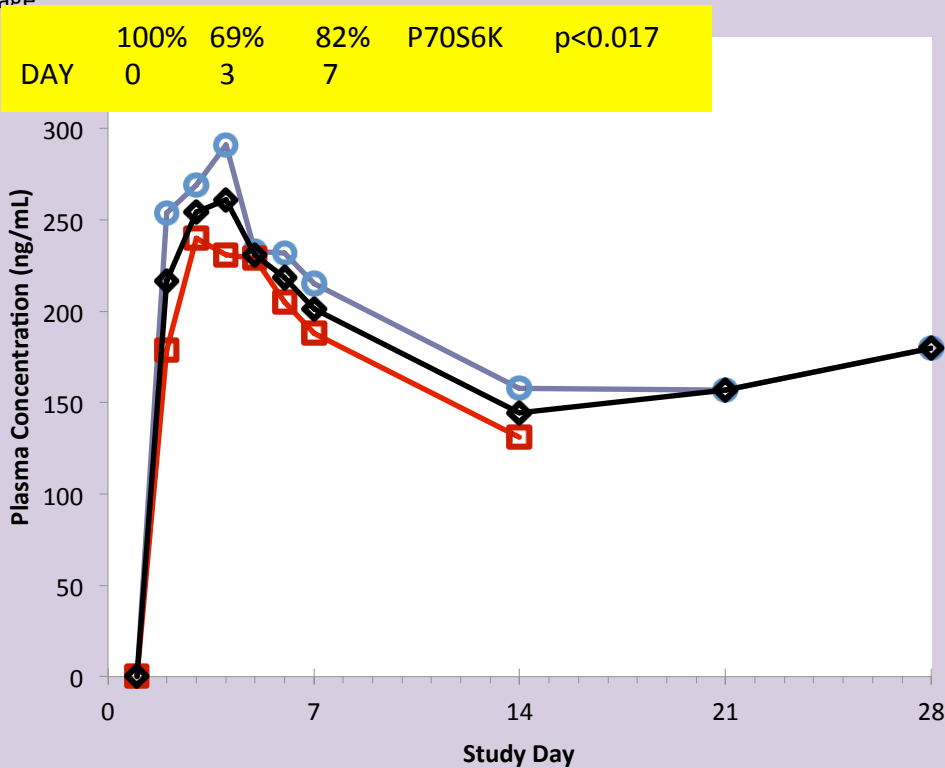
ACCELERATED ENTRY INTO MAN DUE TO EXTENSIVE TOXICOLOGY BY GLOBAL MAJOR

- **Patient #1** -> 28 Day Completed (5mg/kg) with no adverse events; requested to continue on drug after day 28 and CT Scan showed “Stable Disease”. Further subsequent testing showed progression and patient was discontinued.
- **Patient #2** -> Discontinued after 13 days due to urinary tract infection
- **Patient #3** -> Discontinued after 4 days
- **Patient #4** -> Ongoing currently completed 26 days
- **Patient #5** -> Ongoing currently completed 6 days

Successful Demonstration of Safety and Indication of
Potential clinical value will
Lead to a Phase II trial with Chemotherapy

PK AND P70S6K (Preliminary Results)

—○— MPLS, R101
—□— MPLS, R02
—◆— MPLS. Average



Canine Trial

No Adverse Events Noted

- Four Dogs Received MPL (25mg/kg) compassionately
- Three Dogs treated with the lowest dose of MPL (25mg/kg) as part of trial

Tasteless
Formulation of
MPL in Soft-
Gel Capsules



Albendazole for the Treatment of Ascites



Two Clinical Trials Completed Showing:

1. Maximum tolerated dose
2. Benefits in Localised Therapy in the abdomen
3. Significant Inhibition of VEGF

Albendazole Ascites I

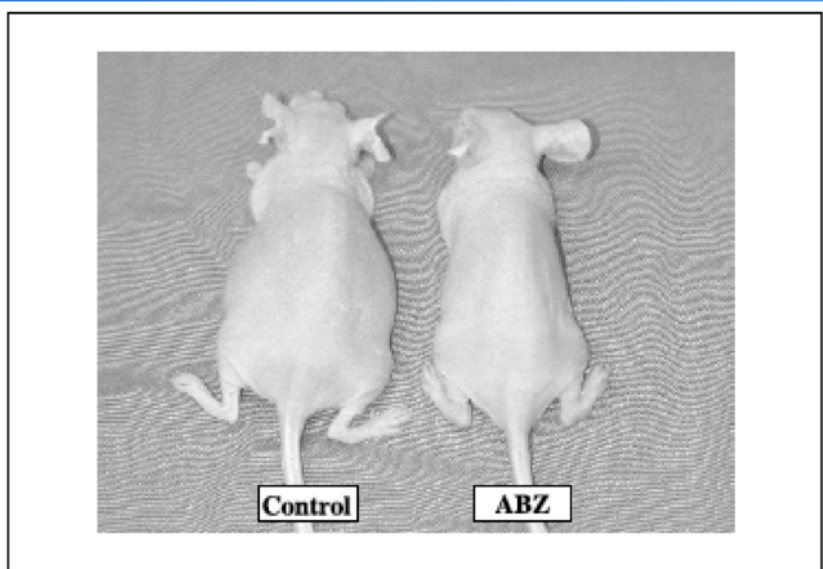


Fig. 1. Effect of albendazole (*ABZ*) on ascites development. Nude mice inoculated i.p. with OVCAR-3 cells were left to develop ascites and then randomly assigned to one of control or albendazole treatment groups ($n = 10$ per group). Whereas all mice in the control group developed overt ascites, there were no macroscopic signs of ascites formation in albendazole-treated mice.

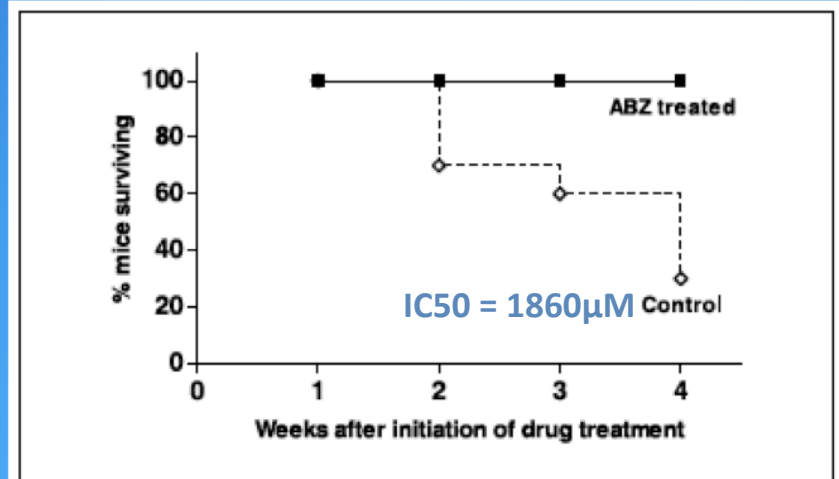
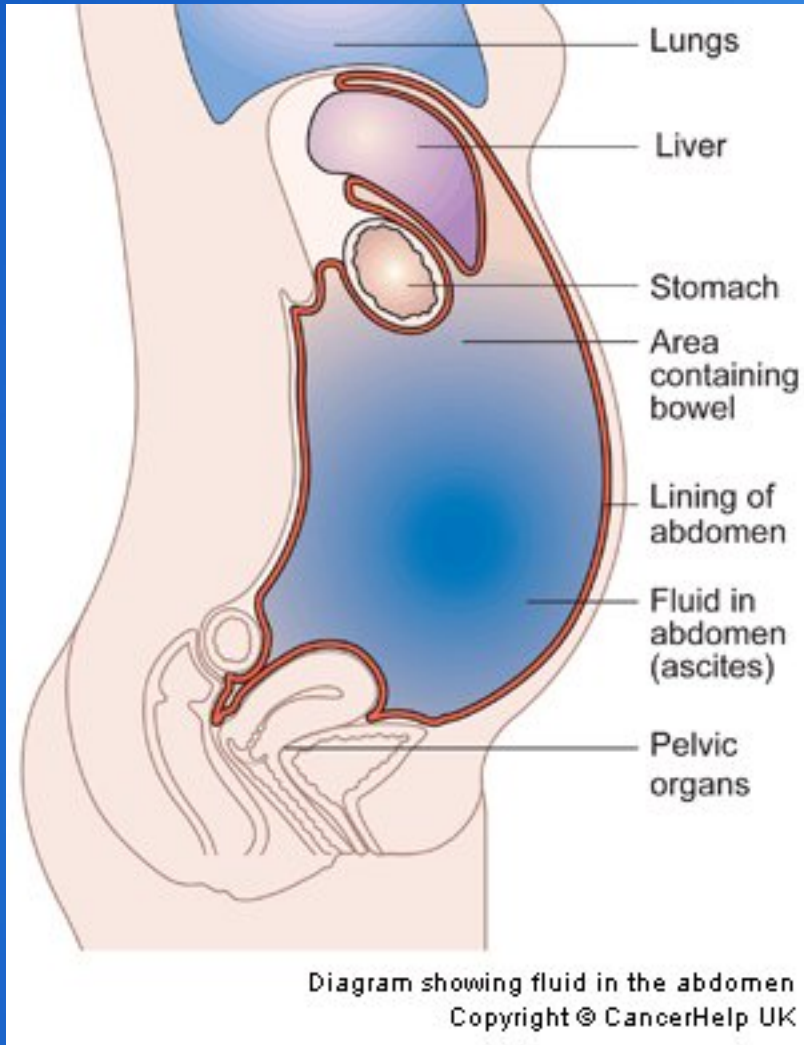
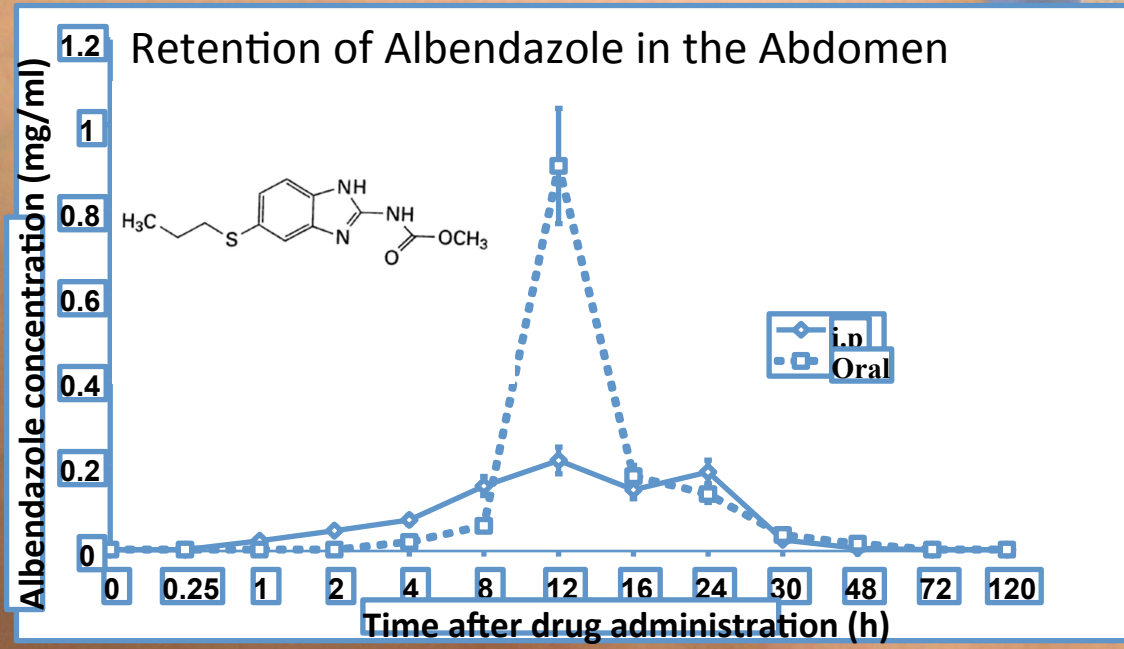


Fig. 3. Survival curve showing the effect of albendazole (*ABZ*) on survival. Whereas for all animals the intended duration of treatment was 4 weeks, mice (10 per group) were euthanized if due to ill health, they were expected to become moribund within a short time. Survival was calculated as the number of days lapsed between initiation of treatment and euthanasia, and % mice surviving was the number of animals remaining in each group ($\times 10$) at the end of each week following initiation of treatment.

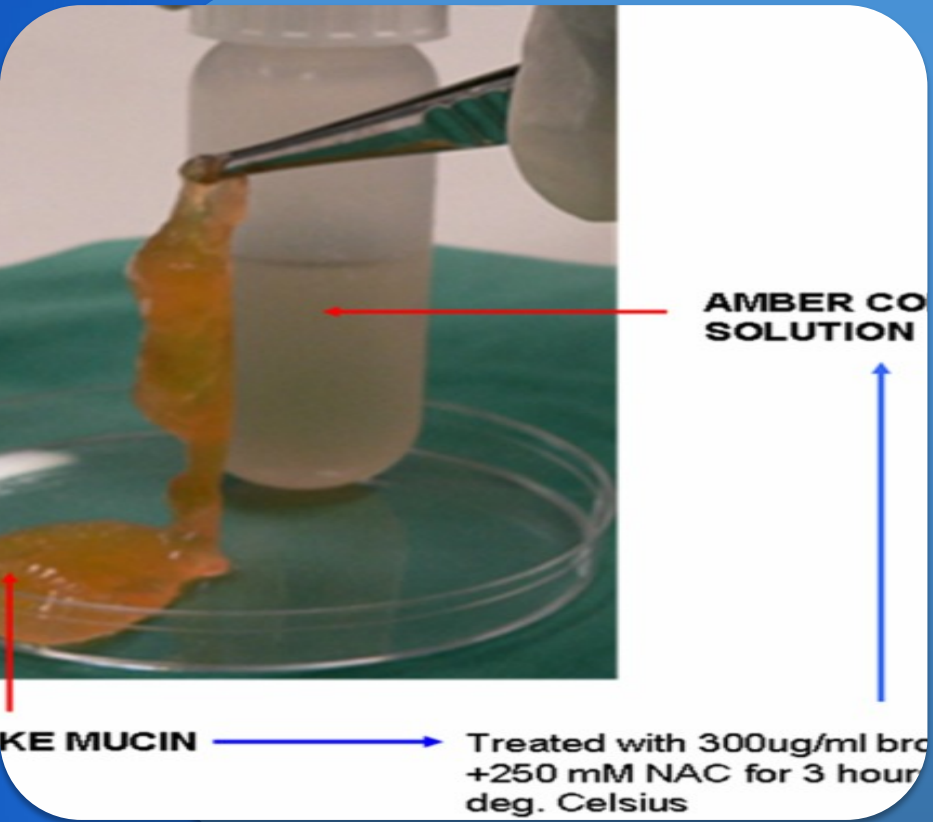
Ascites in Man





Tumour Growing in the Abdomen and producing large quantities of Ascites fluid which distends the abdomen and reduces life expectancy

Mucin Dissolution



Efficacy of a Novel Mucolytic Agent on Pseudomyxoma Peritonei Mucin with Potential for Treatment through Peritoneal Catheters

About Epichem



- Formed in 2003
- Wholly owned subsidiary of PharmAust Ltd
- Expertise in synthetic & medicinal chemistry
- 17 Employees (16 BSc, 12 PhD)
- Laboratories in Perth & Melbourne

Our Business

- Contract research (fee-for-service)
 - predominantly for the drug discovery sector
- Collaborative research (IP generation)
 - with partners with expertise and assets in biology
- Manufacture reference standards
 - predominantly for the pharmaceutical sector
 - rapidly expanding catalogue of products
- **Revenue generating and profitable**

World Class - Globally Competitive



customers in 32 countries

Export Awards 2010-2013



Western Australian
Industry and Export Awards



Prospects for Contract Research Business



- Global market for chemistry outsourcing is US\$11bn
 - ...and growing at 10.5% p.a.
- Australian sector recovering following GFC
- The falling AUD and Epichem's growing reputation opens new opportunities in overseas markets
- Revenues and profitability from this business are good but constrained by the number of chemists/fumehoods
- Epichem is currently seeking extra laboratory space to exploit this market opportunity

Prospects for Reference Standards Business



- Global market > US\$1bn p.a.
- Highly fragmented market with 2 major suppliers
 - USP sales of ~US\$140M p.a.
 - LGC sales of ~US\$110M p.a.
- Significant market growth due to:
 - ever increasing regulatory requirements
 - new & improved analytical techniques
 - new drugs entering market, especially illicit drugs
- Epichem aiming for 1% of market (>\$10M) by 2020

Contact Details



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